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to Illinois



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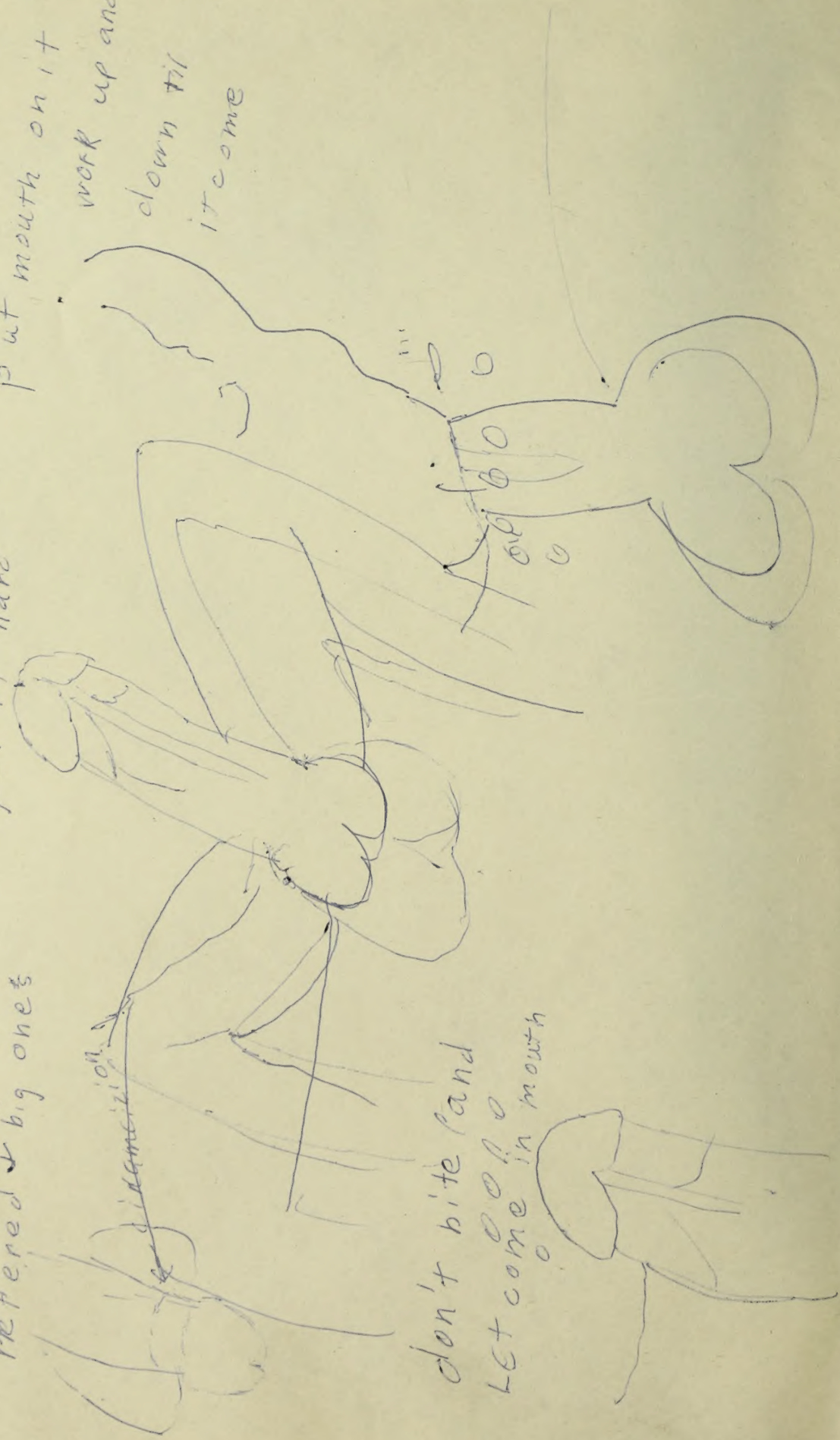
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Charles Leslie Stewart

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Reference to Illinois

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LAND TENURE IN THE UNITED STATES WITH
SPECIAL REFERENCE TO ILLINOIS

BY

CHARLES LESLIE STEWART

A. B. Illinois Wesleyan University, 1911

A. M. University of Illinois, 1912

THESIS

Submitted in Partial Fulfillment of the Requirements for the

Degree of

DOCTOR OF PHILOSOPHY

IN ECONOMICS

IN

THE GRADUATE SCHOOL

OF THE

UNIVERSITY OF ILLINOIS

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Preface

This thesis is based largely upon United States census statistics, the reliability of which need seldom be questioned.

Illinois is regarded here as a suitable state in which to make a type study of land tenure. Its value for such a study arises from : (1) its size and importance in the production of grain; (2) the variety of conditions in its agricultural economy; (3) its location in the great farming region of the Mississippi valley; (4) the ease of access its farmers have to large local markets as well as to other domestic and to foreign markets; and (5) the fact that, agriculturally, Illinois is neither an old nor a new state, the tenure statistics beginning at the time when nearly all of the present farm area had just been put into cultivation.

It was planned to carry on more field investigation than circumstances have permitted. There is need for cost accounting studies in the relative profitableness of various forms of tenure to the landlords and to the operators. The need for a thorough investigation of the relation of tenure to co-operative enterprise, roads, schools, churches, and social life is equally pressing.

Charles Leslie Stewart

University of Illinois,

May 12, 1915.

This volume is based largely upon United States Census statistics, the reliability of which need not be questioned. Illinois is regarded here as a unitary state in which to make a type study of land tenure. Its value for such a study comes from: (1) its size and importance in the production of grain; (2) the variety of conditions in its agricultural economy; (3) its position in the great farming region of the Mississippi valley; (4) the ease of securing the necessary data; (5) the fact that, geographically, Illinois is not so old nor a new state, but forms a continuous region from the time when nearly all of the present farm area had just started into cultivation.

It was planned to study on more than 1000 farms in Illinois. The conditions have permitted. There is now but one hundred studies in the relative productivity of various types of farms in the land, and to the question. The need for a thorough investigation of the relation of farms to co-operative organizations, trusts, schools, churches, and social life is equally pressing.

Charles J. Allen

University of Illinois
 May 12, 1914



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LAND TENURE IN THE UNITED STATES
WITH SPECIAL REFERENCE TO ILLINOIS

CHAPTER I

A SKETCH OF LAND TENURE IN THE UNITED STATES

General Characteristics of American Land Tenure

From the earliest date of colonization the land in the territory of the United States has been held under a system of tenure distinguished for its simplicity. The feudal tenure of Europe never obtained much footing in the United States and was influential chiefly in that Americans reacted against it.¹ In place of a complicated system of legal fictions and customary relations and charges, the land system of the United States may be said to consist simply of two forms: ownership; and tenancy, whether on a cash, share or combined basis. The ownership is that which is known technically as allodial, that is, ownership in fee simple, free from any rent, services, or other restriction except that reserved by the state in its right to tax, exercise police power, and force sales by virtue of the power of eminent domain.

Between the years 1782 and 1790, six of the seven confederated states which had claims to lands west of the Appalachian

1. Taylor, H. C.: Cyclopedia of American Agriculture, IV, pp. 174-175.

mountains had their cessions accepted by Congress.¹ This placed upon Congress the responsibility of disposing of the Western lands. Congress in 1785 and 1787 passed resolutions which established the foundations of the national land policy. The principles laid down were that the land should be alienated by the government to settlers, that non-resident land owners should not be taxed higher than resident land holders, the New England rectangular surveying system should be employed, the lands surveyed prior to settlement, the price low, minimum parcels small, registry cheap, conveyance simple, and that the property of persons dying intestate should be equally distributed among the children. These provisions, together with the abundance of the lands, have exercised a most democratic influence upon the agricultural, social and political life of the nation.²

The public domain of the United States grew by conquest and purchase at a most phenomenal rate. The following table summarizes and illustrates this expansion:

 1. New York, 1782; Virginia, 1784; Massachusetts, 1785; Connecticut, 1786, and North Carolina, 1790. The offer of Georgia was made and rejected in 1788 and a satisfactory agreement was not reached until 1802. See Treat, P.J., The National Land System, 1785-1820, p. 15.

2. Treat, P.J.: op.cit., chapter II.

Table showing the growth of the public domain¹

	Dates	Square miles	Acres
Cession by States	Mar. 1, 1781 Apr. 24, 1802	404,955.91	259,171,787
Louisiana Purchase	Apr. 30, 1803	1,182,752.00	756,961,280
East and West Florida Purchase	Feb. 23, 1819	59,268.00	37,931,520
Ceded by Mexico	Feb. 2, 1848	522,568.00	334,443,520
Texas Purchase	Nov. 25, 1850	101,767.00	65,130,880
Gadsden Purchase	Dec. 30, 1853	45,535.00	29,142,400
Alaska Purchase	Mar. 30, 1867	577,390.00	369,529,600
Total		2,894,235.91	1,852,310,987

(1) Sato, Shosuke: History of the Land Question in the United States, p. 76.

The following table illustrates the rate at which the public lands were disposed of by the Government.¹

Period	Number of acres sold per annum
1787-1810	200,000
1811-1820	1,530,000
1821-1830	1,010,000
1831-1840	6,230,000
1841-1860	3,430,000
1861-1880	4,710,000
1881-1888	12,400,000

(1) Taylor, H. C. Syllabus of Lectures on Agricultural Economics, Pt. I, p. 78.

From 1888 to 1900 the annual amount of land taken up underwent a rapid decline, and since 1900 very little land has been taken up.¹

Under such conditions there is little wonder that during the earlier days the major part of the population devoted itself to agriculture. The census enumerations show that in 1820, 83.0, and in 1840, 77.5 per cent of the "occupied" population was engaged in agriculture.²

Not only did agriculture employ the energy of the larger part of the American people up to the middle of the last century, but the great portion of the free farm families was undoubtedly in full possession of their farms and homes. The land was taken up, in most cases, in tracts of a size suitable for almost every one to own a farm; the owners were usually in such an economic condition that they needed the full return from their land instead of the small fraction which they could receive as rental income; and finally, the development of urban life had not yet gone to such a point as to invite landowners in any great measure to leave their farms to reside in the cities. Under such conditions tenancy must not have had any great place in American agriculture.

The path to land ownership needed at most to have no more than three stages, that of farm laborer, followed by a period of operating leased land, and ending in the ownership of one or more farms. The passage from a propertyless to a propertied

1. Taylor, H. C. Syllabus of Lectures on Agricultural Economics, Pt. I, p. 78.

2. See Appendix I, pages 226-228.

condition was one almost certain in its possibility of accomplishment by any able-bodied and industrious individual. In many cases, the laborer entered land directly without having to pass through the tenant status. Where tenancy was resorted to as a step to land ownership, it was a status from which the individual could usually rise in a few years.

Rents were competitive, to be sure, but with good lands existing in excess of the demand, rents could not have been excessive.

The Trend of Tenure, 1850 to 1880

Whether tenancy was becoming more prevalent or less prevalent during the generation before 1880 is a question. The estimates and opinions on tenancy before 1880 are hard to free from the prejudices which were prevalent at the time when they were expressed.

Possibly the most definite opinions offered on the trend of tenure before 1880 were those of Dr. L. G. Powers who supplied some statistics on land tenure for the period 1850 to 1870.¹ Estimates for 1880 are also given, which bear some relation to the tenure statistics of the census of that date. The estimates are as follows:

1. Used before the meeting of the International Statistical Institute at Petrograd in August, 1897, and reported in the American Statistical Association Publications, Volume 5, 329-344.

Year	1850	1860	1870	1880
Total farm families	2,458,000	3,358,750	4,082,700	4,935,000
Farm owning families	1,325,000	1,850,000	2,220,000	3,068,000
Families of tenants, laborers and slaves	1,133,000*	1,508,750	1,862,000	1,867,000
Families of slaves	461,500*	595,000	.....	.....
Families of tenants and laborers	672,500*	913,750	1,862,000	1,867,000
Families of tenants	.....	.....	.....	1,325,000 ⁺
Families of laborers	.....	.....	.....	542,000

American Statistical Association Publications, V, p. 344.

*An error of 100 was made somewhere in these figures.

⁺This is 300,000 in excess of the number of tenant farms as reported by the Tenth census. See below, p. 9.

From these estimates it appears that the increase in the number of farm owning families was over twice as large as the increase in the number of families of tenants and laborers, (including slaves in 1850). The percentage of farm families owning their farms increased, according to the view of Dr. Powers, from 53.9 in 1850, to 62.2 in 1880.

It is probable that the estimate that only 54.0 per cent of the farm families owned their farms in 1850 is an under-emphasis of the extent to which ownership prevailed at that time. Several reasons can be offered to show that tenant-farming must have been much less prevalent in 1850 than in 1880, as against the view of Dr. Powers that the trend was in the opposite direction. In the first place, in 1850, the cotton lands were operated largely by the owners, of whom those who were too poor

to own slaves were too poor to live without cultivating their own land, and those who had slaves seldom leased the land to others to operate. Outside of the cotton belt, land was being taken up in the North and West at a rapid rate, particularly during the sixties. Those who took up new land were to some extent former tenants, and by changing to owners must have tended to reduce the percentage of tenancy. Since the area of recently occupied land was being rapidly extended in the West, the influence of that section must have been more strongly against tenancy in the seventies than in the fifties. There seems, certainly, to be no evidence that the trend of conditions between 1850 and 1880 was enough different from the trend since 1880 to cause a movement toward ownership before 1880 and toward tenancy after that date.

On the other hand it is true that large farms were characteristic of some parts of the country, and that we are accustomed to think that the prevalence of large farms is conducive to tenant operation. The large farms of the early days, however, were chiefly in the newer country, where land ownership was easy to acquire. In the older parts of the country the areas of farm land cultivable by a family were made larger by the increasing use of machinery, but the farms were becoming better improved and smaller in all except the Southern states. The tendency to subdivide the older farms probably stayed somewhat the trend toward tenant farming, though it would be difficult to say that it overcame that tendency.

Between 1850 and 1880, it is probable that the tendency in the South was towards tenancy, in the West towards ownership,

and in the North and East, towards tenancy. In the country as a whole the trend towards tenancy was getting under way.

The Trend of Tenure, 1880 to 1910

Beginning with the Tenth census, 1880, we have reliable statistics on tenancy for every county in the United States. These data have been taken with the farm¹ as the basis for the Tenth, Eleventh, Twelfth, and Thirteenth enumerations. At the Eleventh census, additional data were gathered on farm and home ownership. In the Twelfth and Thirteenth census reports tenure statistics are also offered on the basis of acreage of land in farms.

When the results of the Tenth census were published considerable surprise was evinced at the extent to which the farms of the nation were operated by tenants. Since that time, however, tenancy has become more and more prevalent in the country. The statistical evidence of this tendency is summarized in the next two tables.

The first table gives an analysis of the population engaged in agriculture.

1. See Appendix II, pp. 229-231.

Number of all farms and of those operated by owners and by tenants; number of persons 10 years old and over employed in agriculture and the number of such persons in excess of the number of farms, with proportional number; summary, 1880 to 1910.¹

Census Year	1910	1900	1890	1880
Number of farms				
Total	6,361,502	5,737,372	4,564,641	4,008,907
Operated by				
Owners, part				
owners and				
managers	4,006,826	3,712,408	3,269,728	2,984,306
Part owners	593,825	451,376	.....	.....
Tenants	2,354,676	2,024,964	1,294,913	1,024,601
Persons employed				
in agriculture ² ..	12,373,159	10,268,138	9,057,365	8,183,732
Excess over the				
number of farms	6,011,657	4,530,766	4,492,724	4,174,825
Number to 1000				
persons in agricul-				
ture of				
Farms of owners,				
part owners and				
managers	323.8	361.5	361.0	364.6
Part owners	48.0	44.0	.....	.....
Tenants	190.3	197.2	143.0	125.2
Persons without				
tenure	485.9	441.3	496.0	510.2

Thirteenth census, V, 122, and Appendix III, page 232.

1. The table presented here is a correction and continuation of one in the introduction to the Twelfth census report on agriculture. (Twelfth Census Statistics of Agriculture, lxxxviii). The effect of the correction is to increase the number and relative prominence of the "persons not owners or tenants". The illustrative table given in the census left out all females. In addition it eliminated a fraction of the males in agriculture under 16 years of age, a method which could not be employed in the case of the 1910 census data, and which probably should not have been employed at all.

2. Exclusive of apiarists, woodchoppers, lumbermen, raftsmen, fishermen, oystermen, foresters, owners and managers of log and lumber camps, and those in other agricultural and animal husbandry pursuits so far as separately reported.

All of the elements of the farm population showed an increase in number in 1910 when compared with 1880, but the increase in the relative prominence of the tenants is the outstanding feature of the table. The percentage of increase in the number of farms was 60; in the number of tenants, 130; owners, part owners and managers, 35; all persons engaged in agriculture, 40; and persons other than owners, part owners, tenants and managers, 20. The relative decrease in prominence of the latter class, the farm employees, is probably due to the increased efficiency of all farm workers. The total acreage per male in agriculture increased from 65.5 in 1880 to 71.0 in 1910, an increase of 8.4 per cent.¹ The improved acreage per individual in agriculture was 38.7 in 1910 as compared with 34.8 in 1880,

1. Improved and unimproved land in farms,
United States, 1880 to 1910.

Cen- sus Year	Acres of land in farms.			Average number of acres per individual in agriculture.		
	Total	Improved	Unimproved	Total	Im- proved	Unim- proved
1910	878,798,325	478,451,750	400,346,575	71.0	38.7	32.3
1900	838,591,774	414,498,487	424,093,287	81.7	40.4	41.3
1890	623,218,619	357,616,755	265,601,864	68.8	39.5	29.3
1880	536,081,835	284,771,042	251,310,793	65.5	34.8	30.7

United States census reports: Twelfth, V, xviii, and Thirteenth, V, 28.

The extra large acreage per individual in 1900 was due to the record acreage of unimproved land in farms at that date, that being the only census since 1870 in which over half of the land was reported unimproved.

an increase of 10.0 per cent. The cause of this increase is to be found mainly in agricultural machinery, the use and labor-saving efficiency of which has undergone a considerable increase during the period since 1880.¹

The table on the next page summarizes the existing data on the tenure of farms and acreage.

Taking the country as a whole the percentage of farms operated by tenants increased from 25.6 in 1880 to 37.0 in 1910, the decade during which the major part of the increase took place being the one from 1890 to 1900. Every division of the country outside of New England showed an increase in the percentage of tenant farms. In the North Central group the percentage rose from a little over 20 in 1880 to somewhat less than 30 in 1910; in the South Central states, from about 36 in 1880 to a little over 50 in 1910; and in the South Atlantic group from 36 to nearly 46 in 1910.

The old New England farms and the new Western farms each showed small percentages of tenancy, the former chiefly because of the agricultural depression which drove tenant farmers to other sections, and the latter largely on account of the chance for one to become owner of land for himself.

One characteristic of the trend in tenant farming in the United States is that the divisions of the country seem to present

1. Quaintance, H. W. *Cyclopedia of American Agriculture*, IV, p.108f; and *Publications of the American Economic Association*, Third Series, Volume V, separately printed.

Percentage of farms and of the farm acreage operated under various forms of tenure, United States, 1880-1910.

Geographical divisions

	United States	New England	Mid-Atlantic	East North-Central	West North-Central	South-Atlantic	East South-Central	West South-Central	Mountain	Pacific
FARMS										
Tenants										
1910	37.0	8.0	22.3	27.0	30.9	45.9	50.7	52.8	10.7	17.2
1900	35.3	9.4	25.3	26.3	29.6	44.2	48.1	49.1	12.2	19.7
1890	28.4	9.3	22.1	22.8	24.0	38.5	38.3	38.6	7.1	14.7
1880	25.6	8.5	19.2	20.5	20.5	36.1	36.8	35.2	7.4	16.8
Part owners										
1910	9.3	3.1	5.5	11.7	16.1	6.4	6.9	7.6	8.6	10.9
1900	7.9	2.9	4.4	10.0	14.5	4.9	5.0	5.5	8.3	11.3
Managers										
1910	0.9	2.8	1.9	1.0	0.8	0.7	0.3	0.5	1.6	2.8
1900	1.0	2.5	1.7	1.0	0.8	0.9	0.5	0.7	3.4	2.9
Owners proper										
1910	52.7	86.1	70.3	60.3	52.3	46.9	42.1	39.1	79.1	69.1
1900	55.8	85.2	68.5	62.8	55.1	49.9	46.3	44.8	76.1	66.1
ACREAGE										
Tenants										
1910	25.8	7.8	25.9	30.0	27.0	30.1	27.9	26.7	10.6	19.8
1900	23.3	9.4	28.6	27.3	23.6	30.6	27.4	19.0	9.4	19.5
Part owners										
1910	15.2	4.2	7.4	13.9	23.9	6.3	8.0	13.8	16.7	21.7
1900	14.9	4.2	5.9	11.7	23.7	4.7	5.8	17.7	22.0	19.6
Rented by part owners										
1910	7.4	1.6	2.1	6.2	11.5	2.4	2.7	6.4	8.9	1.1
1900	7.1	1.6	1.6	5.2	11.4	1.8	2.0	8.2	12.5	1.0
Owned by part owners										
1910	7.8	2.6	5.3	7.7	12.4	3.9	5.3	7.4	7.8	20.6
1900	7.8	2.6	4.3	6.5	12.3	2.9	3.8	9.5	9.5	18.6
Owners proper										
1910	52.9	82.5	62.7	54.1	47.0	60.4	62.1	47.9	53.2	43.1
1900	51.4	82.5	62.2	59.0	49.4	61.4	64.8	37.1	33.0	42.9
Managers										
1910	6.1	5.5	4.0	2.0	2.1	3.2	2.0	11.6	18.5	15.4
1900	10.4	3.9	3.3	2.0	3.3	3.3	2.0	26.2	35.6	18.0
All lessees										
1910	33.2	9.4	28.0	36.2	38.5	32.5	30.6	33.1	19.5	20.9
1900	30.4	11.0	30.2	32.5	35.0	32.4	29.4	27.2	21.9	20.5
All deed-holders										
1910	60.7	85.1	68.0	61.8	59.4	64.3	67.4	55.3	62.0	63.7
1900	59.2	85.1	66.5	65.5	61.7	64.3	68.6	46.6	42.5	61.5

Authority: United States census reports: Twelfth, V, 308; and Thirteenth, V, 114, 122 and 123.

a wider range of percentages each succeeding decade, that the percentage of tenant farms has moved forward most where it was highest previously, and has shown least positiveness in increasing where it was already low. Taken as a whole, however, the increase has been persistent, although not fast, especially during the decade following 1900.

The farms operated by part owners and managers were doubtless classified with those of owners proper in 1880 and 1890. There has been a tendency to adopt the same practice in presenting the tenure statistics for 1900 and 1910, especially where comparisons with the earlier dates were being made. So far as the managed farms were concerned, the error involved in counting them in with the farms operated by owners is not great. In no section did the managed farms constitute more than three per cent of all farms in that section in 1910, and, after all, the farm manager is in a sense a representative of the owner. The inclusion of the partly owned farms with the farms of owners proper is also partially excusable. In 1900 the farms of part owners contained on the average nearly 5 acres more of owned land than the average farm entirely owned at that date.¹ The part owners constituted 9.3 per cent of all farm operators in 1910.

While the tenure statistics on the basis of "farms" give a fairly correct impression of the distribution of the various kinds of operators, placing the data on the acreage basis gives some interesting variations from the previous impressions. The

1. 139.6 to 134.7. See below, p. 28. .

cause of the variations is the differences that exist in the size of farms of various tenures and in different sections.

The table on the next page shows the average acreage of all farms and of farms of various tenures for 1900 and 1910.

It will be seen that the average acreage of all farms declined from 146.2 in 1900 to 138.1 in 1910, and that only the North Central States showed any tendency toward an increase in the size of farms. The movement was not, therefore, toward a farm of standard size for the whole country, inasmuch as the divisions where small farms prevailed in 1900 underwent a still further reduction in the size of the operating units.

As a rule, the tenants operated farms less than two-thirds as large as those operated by the owners, the ratio in acres being 96 to 139 in 1900 and 96 to 135 in 1910. In the North East quarter of the country and in the Mountain and Pacific divisions the reverse is the case, the size of tenant farms being greater than that of the farms operated by the owners. The most striking case is afforded by the South Central states where the tenant farms are between a third and a half as large, on the average, as the farms of owners.

The farms of part owners were approximately twice as large as those of owners proper in 1900, but fell off nearly 20 per cent by 1910, while the farms of owners proper underwent a slight increase during that period. The enormous farms of managers were in the territory west of the Mississippi river, where the farms of all tenures, except tenants in the West South Central states, were much above the general average in size.

Average number of acres per farm.

Geographical divisions.

	U.S.	New Eng- land	Mid- dle At- lan- tic	East North Cen- tral	West North Cen- tral	South At- lan- tic	East South Cen- tral	West South Cen- tral	Moun- tain	Pac- ific
Total										
1910	138.1	104.4	92.2	105.0	209.6	93.3	78.2	179.3	324.5	270.3
1900	146.2	107.1	92.4	102.4	189.5	108.4	89.9	233.8	457.9	334.8
Tenants										
1910	96.2	102.5	107.4	116.4	183.4	61.3	43.1	90.6	318.1	310.1
1900	96.3	107.1	104.5	106.3	150.6	75.0	51.1	90.3	349.6	331.9
Owners proper										
1910	138.6	100.0	82.2	94.7	188.4	120.1	115.1	220.1	223.0	169.0
1900	134.7	103.7	83.8	97.1	170.5	133.7	125.9	194.2	201.5	218.0
Owners and part owners										
1910	151.6	101.5	85.3	99.2	217.1	116.5	111.9	236.7	262.8	219.0
1900	152.2	105.4	86.1	99.7	199.3	130.7	123.8	255.2	298.8	270.3
Part owners										
1910	225.0	142.2	125.2	124.8	311.3	91.7	90.9	324.2	625.0	538.1
1900	276.4	153.2	122.3	120.2	310.5	104.4	103.3	755.8	1196.7	581.2
Man- agers										
1910	924.7	202.2	188.9	217.0	597.0	405.5	487.5	4194.7	3778.8	1512.0
1900	1481.2	167.8	179.1	202.3	785.3	379.8	345.8	9330.0	4833.2	2049.4

Thirteenth census, V, 114, 137.

On the basis of farms, the prevalence of tenancy was most marked in the Southern states.¹ The number of tenant farms and the percentage of farms operated by tenants in the states of those divisions has been so great and increasing so rapidly as to give more or less alarm to some students of the situation.

1. See next page.

(1) The following table shows the number of tenant farms in the eight states leading in that respect in 1910.

	Ill.	N.C.	S.C.	Ga.	Ala.	Miss.	Ark.	Texas
1910	104,379	107,287	111,221	190,980	158,326	181,491	107,266	219,575
1900	103,698	93,008	94,889	134,570	128,874	137,852	81,140	174,991
1890	81,833	60,890	63,580	91,594	76,631	76,260	40,054	95,510
1880	80,344	52,722	47,219	62,175	63,649	44,558	29,188	65,468

Thirteenth census, V, 210-213.

Rank of each state in number of all tenants.

	Ill.	N.C.	S.C.	Ga.	Ala.	Miss.	Ark.	Texas
1910	8	6	5	2	4	3	7	1
1900	5	7	6	3	4	2	10	1
1890	3	8	7	2	4	5	17	1
1880	1	7	8	4	3	11	17	2

The table below shows the percentage of farms operated by tenants in the thirteen states (including the District of Columbia) leading in that respect in 1910.

	Percentage of farms rented.				Rank among all states in percentage of farms rented.			
	1910	1900	1890	1880	1910	1900	1890	1880
Illinois	41.4	39.3	34.0	31.4	11	13	10	11
Delaware	41.9	50.3	46.9	42.4	10	6	5	5
Dist. Col.	38.7	43.1	36.6	38.2	13	10	8	6
N. Carolina	42.3	41.4	34.1	33.5	9	11	9	10
S. Carolina	63.0	61.1	55.3	50.3	3	2	1	1
Georgia	65.6	59.9	53.5	44.9	2	4	2	3
Tennessee	51.1	40.6	30.8	34.5	12	12	13	9
Alabama	60.2	57.7	48.6	46.8	4	3	4	2
Mississippi	66.1	62.4	52.8	43.8	1	1	3	4
Arkansas	50.0	45.4	32.1	30.9	8	8	11	13
Louisiana	55.3	58.0	44.4	35.2	5	4	6	8
Oklahoma	54.8	43.8	....	....	6	9	49	49
Texas	52.6	49.6	41.9	37.6	7	7	7	7

Thirteenth census, V, 122-127.

When, however, the statistics of tenure are placed on the acreage basis, the percentage of tenancy in the South loses much of its alarming magnitude. This is due to the smallness of the tenant farms in that region. The significance of tenancy in the South, however, is not minimized but rather augmented, perhaps, by the fact that the great numbers of tenants operate small farms. On the acreage basis the East North Central division is nearly abreast with the South Atlantic division in the percentage of tenancy, while the West North Central states stand between the East and West South Central groups.¹ As a whole, tenancy appears to be much more nearly uniform throughout the country when regarded from the acreage point of view.

The portion of the farm acreage operated by part owners and by managers is, because of the largeness of their farms, much greater than their relative numbers among farm operators.

Part owners operated three-fifths as much farm land as tenants in the United States in 1910, and nearly half of what they operated was rented. Considering the rented land in partly owned farms, the surprising fact appears that in 1910 the percentage of tenancy was greatest, not in the Southern states, but in the North Central states. The percentage of tenancy in the country as a whole is somewhat smaller than indicated by the data based on the number of farms, but was increasing between 1900 and 1910 faster than the respective percentages of farms operated by tenants would indicate.

1. See next page.

(1) States leading in the percentage of farm land operated under lease, 1900 and 1910.^c

Census year	State	Percentage of farm land rented by			Rank among all states
		Tenants	Part owners	All lessees	
1900	Delaware	58.7	0.8	59.5	1
	Illinois	38.6	6.6	45.2	2
	Maryland	41.9	1.3	43.2	3
	Oklahoma	34.0	8.8	42.8	4
	Iowa	33.6	6.4	40.0	5
1910	Oklahoma	43.1	20.0(a)	63.1(d)	1
	Delaware	52.1	0.7(a)	52.8(d)	2
	Illinois	43.6	6.4(b)	51.0(d)	3
	Georgia	42.0	4.0(c)	46.0(d)	4
	Iowa	39.0	6.3(a)	45.3(d)	5

^b Thirteenth census, V, 130, 131; and
Twelfth census, V, 142, 308.

(a) Estimates based as follows on changes from 1900 to 1910.

State	Change in number of partly owned farms	Change in average size of all farms	Index of change
Oklahoma	+211.4	-38.7	+150.7
Delaware	-0.3	-12.9	-13.3
Georgia	+63.4	-21.2	+50.0
Iowa	-8.4	+3.4	-8.1

Thirteenth census, V, 820, 124-126.

The index is multiplied by the percentage of acreage leased by part owners in 1900.

(b) See below, page 65.

(c) Percentage in 1900, 2.7.

(d) Sums subject to error in preceding column.

Managers controlled 6.1 per cent of the farm land in 1910. In the West South Central and Mountain divisions they operated between 10 and 20 per cent of the land.

In nearly all discussions of land tenure in the United States, only the statistics on farms operated by tenants have been employed, and the reader is naturally inclined to consider the farms not operated by tenants as cultivated by their owners. As a consequence, it would most naturally be suggested by the data on the percentage of farms operated by tenants that

(1) Ownership was least prevalent in the Southern states; that

(2) The farms of the Mountain and Pacific states were almost exclusively in the hands of owners; and that

(3) The relative prevalent of operation by owners was declining between 1900 and 1910.

Considering that part owners owned only a little more than half the land they cultivated and that managers are not to be identified with owners, the standpoint of the land requires a correction of the three impressions just enumerated. Ownership of operated acres, outside of the New England and Middle Atlantic states, was most prevalent in the East South Central and South Atlantic states. Ownership was least common in the West South Central and West North Central groups. In the territory east of the Mississippi river, ownership was less prevalent in the (East) North Central states than in any other division.

The percentage of operation by the deedholders, while shown to be smaller by the acreage data given here than might be inferred from the data on farm tenure usually employed, was, for

the country as a whole, larger in 1910 than in 1900. It would thus appear that, while the trend in the tenure of farms was somewhat toward tenancy, the trend in the tenure of farm land has been toward a relative increase of both the leased and the owned acreage at the expense of the acreage controlled by managers. This was true especially in the West South Central, Mountain and Pacific divisions. In the Middle Atlantic states the trend was toward ownership because of the decline in the percentage of farms run by tenants. In the North Central states, however, both east and west of the Mississippi river, and in the East South Central states, the trend was toward land leasing and away from operation by the owners.

On the basis of the acres operated under the various forms of tenure, there is a much greater uniformity between the various parts of the country than might be supposed to be the case should one consider only the tenure statistics based on farms.

Mortgage Encumbrance on Owned Land.

Although approximately 6 out of 10 acres on the average are operated by the owners in the United States, in many cases the nominal owners hold, in reality, only an equity in the land. Statistics on farm mortgages were gathered in 1890, 1900 and 1910. They related only to farm land operated by the owners, the part owners in most cases having limited their reports to the land owned by them.¹

The following table summarizes the results of those enumerations.

1. Thirteenth census, V, 157.

Division.	Percentage of All Farms (for which Mortgage Re- ports were Obtained) Encumbered by Mortgage.			Mortgaged Farms or Farm Homes. Ratio of debt to value (per cent).	
	1910	1900	1890	1910	1890
United States	33.6	31.0	28.2	27.3	35.5
New England	34.9	34.1	28.2	31.8	40.4
Middle Atlantic	38.3	40.3	37.0	34.5	43.2
East North Central	40.9	39.4	37.6	28.6	33.2
West North Central	46.1	44.3	48.0	25.8	33.6
South Atlantic	18.8	16.8	7.4	27.2	40.2
East South Central	22.7	17.0	4.5	29.4	43.3
West South Central	30.6	18.2	4.8	25.1	42.8
Mountain	20.8	14.4	14.1	23.9	31.8
Pacific	36.8	27.6	28.7	23.4	30.1

Thirteenth census, V, 160, 162.

(1) Covers only farms which consisted wholly of land owned by the operator and for which the value of land and buildings and the amount of mortgage debt were reported.

(2) Covers all owned farm homes, estimates being made for all farms with defective reports; the statistics cover only the land owned by the farmer in the case of farmers renting additional land.

From the table it appears that in the country as a whole the percentage of owned farms free from mortgage declined from 71.8 in 1890 to 66.4 in 1910. The percentage of owned farms under mortgage in 1910 was greater in the West North Central group of states than in any other division, although that division was the only one in which there was a decline from the percentage prevailing in 1890. The district of highest percentage of owned farms mortgaged east of the Mississippi was the East North Central

division. Mortgaging of farms operated by owners appears to have been least common in the Southern states, although compared with the percentages prevailing in 1890, in those divisions, the practice appears to have been growing with remarkable rapidity.

Outside of the two North Central groups, there appears to be no correlation between the amount of land renting and the extent to which the owned land is mortgaged. In those divisions, however, we find the highest percentage of the farm land operated under lease, and the highest percentage of the remainder of the farm land owned under mortgage.

In all sections of the country there was a decline in the ratio of debt to value of farm property between 1890 and 1900. The equity increased from 64.5 per cent in 1890 to 72.7 per cent in 1910. This was in spite of the increase of 40.1 per cent in the amount of indebtedness on the average American farm between the two dates. The amount of equity increased 106.0 per cent. It seems, therefore, that the rise in the value of mortgaged farms was so great that the increase in mortgage debt could not keep up with it. This was less true of New England and the Middle Atlantic states, perhaps, than of the remainder of the country, the portion of the value of mortgaged farms covered by mortgage being highest in 1910 in those divisions.

By way of general summary for 1910, it is evident that for the country as a whole 33.2 per cent of the farm acreage was operated under lease, 6.1 by salaried managers, about 20.4 by owners under mortgage to the extent of 27.3 per cent of the value of their places, whereas approximately 40 per cent of the farm *land*

of the country was operated by owners clear of mortgage encumbrance.

CHAPTER II

THE CAUSES AND CHARACTERISTICS OF TENURE STATUS

The reasons why the various forms of tenure hold the place they do in American agriculture may, for the sake of convenience, be considered from three points of view. It is important to understand the point of view of the tenants, part owners and managers as well as that of the owners whose land they operate and of the owners who operate their own land. A consideration of the question which form of tenure best conserves the land and improves farm production requires a somewhat different outlook. The relation of the various forms of tenure to the general economic conditions of the nation is a third point of vantage from which to study tenure.

Owners

We may take up first the standpoint of the operators and owners. There are number of cases where the owners of land could not well keep from being landlords. In the case of women and children inexperience or immaturity as a rule unfits them for operating farms. Owners of land in extraordinarily large tracts, or in tracts widely distant,¹ frequently find that it pays them best to rent some and operate the rest of their soil, or rent all of it and devote their time to other interests, such as those of

1. See next page.

travel, politics, business,¹ health, or some special service. Other interests of this kind would operate as effectively, perhaps, in the case of landowners with no more land than they should ordinarily be able to operate, and may in some cases cause suspension of farm operation for a few seasons where they would not cause the owner to give up for good the cultivation of his land.

(1) The following table summarizes the available statistics on this point.

The percentage of owners of rented farms who owned farms of specified numbers; 1900.

Division	One farm	Two farms	Three and under five farms	Five and under ten farms	Ten and under twenty farms	Twenty farms and over
United States ¹	80.0	11.4	5.4	2.3	0.7	0.2
North Atlantic	92.8	5.5	1.3	0.3	0.1	(2)
South Atlantic	70.4	15.5	8.6	4.1	1.1	0.3
North Central	88.4	8.2	2.6	0.7	0.1	(2)
South Central	70.3	15.1	8.6	3.9	1.5	0.6
Western	91.1	5.9	1.9	0.8	0.2	0.1
Alaska and Hawaii	96.5	2.6	0.9	...	...	...
Foreign countries	88.6	6.1	3.0	1.0	0.9	0.4

1. Percentage for foreign countries was less than 0.1.

(2) Less than 0.1.

Twelfth census, V, lxxxviii.

1. A large number of country bankers, for instance, are so-called "banker-farmers". Not all of these were farmers before they were bankers. (See Stewart, C. L., "An Analysis of Rural Banking Conditions in Illinois," pp. 4-5.)

When owners and the wives of owners become advanced in age, their increasing dependence on hired help in the field and home often makes it advisable for them to give up personal operation of their land.

A second class of owners consists of those who become land holders through inheritance or purchase. In the case of heirs the probabilities are that others share the inheritance, and that the heirs will arrange to have the inherited land operated by a renter, possibly one of their own number. The few who obtain land through the foreclosure of mortgages probably value the land in most cases from the speculative point of view. Many others who purchase land are to be regarded as speculative buyers. Such land owners, awaiting a favorable turn in the price of land, would hardly be inclined to incur the expense of installing the managerial system and would prefer short-lease tenants. When owners are corporations, such as coal, railway, gas, oil, or land improvement companies, the cultivation of the land must usually be of incidental importance to them, even though the land be more or less permanently in their hands. A condition of this kind is conducive either to managerial or tenant cultivation. It would be valuable if we knew what portion of land changing hands goes to persons who take up its operation.

Perhaps the most numerous class of landlords is made up of those who seek retirement from the farm.¹ Many owners leave the farm so that the children may start operating the home place, unhampered by lack of house room, and with greater freedom to work out their problems. It frequently happens that the parents move

1. See next page.

to town so that the children may be at home with them while launching into their school, business or society careers. Parental considerations, however, are often of no more influence than the desire to get away from the objectionable features of rural life, and to get easier access to the institutions and facilities of the city. When retirement is thus made, the land is usually rented, either to a relative by birth or marriage, or to a trusted farm hand.

 1. The extent to which absenteeism prevails among American landlords may be judged somewhat roughly from the following table based on an investigation made in 1900.

Percentage of rented farms whose owners
 resided in specified locations with
 respect to the farms: 1900.

Division	In same county	In other coun- ties of the same state	In other states	Not reported
United States	75.2	15.2	5.1	4.5
North Atlantic	76.0	14.5	4.7	4.8
South Atlantic	77.8	15.2	3.7	3.3
North Central	69.6	17.2	7.3	5.9
South Central	78.8	13.4	4.1	3.7
Western	61.7	22.9	6.8	8.6

Twelfth census, V, lxxxvii.

No doubt there are instances where the landlords living in adjoining counties are closer to their farms than some living in the same county in which their places are located. The same thing doubtless applies in the case of owners living in other states. On the other hand, the residence of owners in the same county does not guarantee a close interest in operations carried on by their tenants.

Part owners

The part owners should probably be classified with owners rather than with tenants. The number of acres cultivated by part owners is compared with the acreages operated by owners and tenants in the following table.

Census year	Average Number of Acres				Percentage of Partly	
	Operated by part owners	Hired by Part Owners	Ten- ants	Owned by Part Owners	Owners Proper	Owned Land Hired
1910	225.0	111.4*	96.2	113.6*	138.6	49.5*
1900	276.4	136.8	96.3	139.6	134.7	49.5

*Estimated as appears in the last column.

United States census reports, Thirteenth, V,
and Twelfth, V, 3 .

Though practically half of the land in the farms of part owners was hired the owned acreage is so nearly comparable to that of operators owning their entire farms that it seems natural to assign the part owners an economic status even higher, on the average, than that of owners proper.¹ It is gratifying to note, therefore, that in spite of the falling off in average acreage of partly owned farms, the percentage of all land operated by part owners increased from 14.9 in 1900 to 15.2 in 1910.² The percentage of their land that was improved was 45.5 in 1900 and 56.9 in 1910, as against a percentage of 50.6 at the latter date for the land of operators owning their entire farms.³

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1. See next page.
 2. See above, page 12.
 3. Thirteenth census, V, 97.

Tenancy, when practised by part owners seems, in general, to be a matter of choice. By renting additional land they practically double the scale of their operations without requiring any great increase in the amount of money they have invested. They are limited in the area from which they may choose land to rent, but in many cases they afford almost the only means an owner can find to get a piece of land operated without equipping it with buildings. The part owners, therefore, may often rent good land at favorable terms. On the other hand, since part owners would not ordinarily be expected to build up the fertility of the land they hire as carefully as that of the land they own, some landlords doubtless discriminate against them.

Often the farm of a part owners is the area formerly

(1) Sectional differences are illustrated in the following table:

Division	1910		1900	
	Total	Total	Hired	Owned
The United States	225.0	276.4	136.8	139.6
New England	142.2	153.2	58.2	95.0
Middle Atlantic	125.2	122.3	33.3	89.0
East North Central	124.8	120.2	53.7	66.5
West North Central	311.3	310.5	149.7	160.8
South Atlantic	91.7	104.4	38.9	65.6
East South Central	90.9	103.3	34.8	68.6
West South Central	334.2	755.8	351.3	404.5
Mountain	625.0	1196.7	689.1	517.6
Pacific	538.1	581.2	29.3	551.9

United States census reports: Thirteenth, V, 114; and Twelfth, V, 308, lxxxiv.

One sees at once that part owners are operators of large tracts of land, particularly in the territory west of the Mississippi river.

comprised in an estate divided among heirs, one of whom rents from the others. In such cases the partition of a farm at the death of the former owner destroys the unity of ownership without destroying the unity of operation.

The large size of the partly owned farms affords evidence that increased investment in farm operations is held by a number of experienced farmers to be best made on an extensive rather than an intensive scale of cultivation. Since an economy is gained by having operators who own their farms hire pieces of land whose size is too small to justify separate sets of buildings, any tendency to reduce the size of holdings in districts of large scale farming should result in an increase in prominence of part ownership.

Tenants

In a number of the Southern states the place of colored tenants is one of great significance. In four states, Mississippi, South Carolina, Alabama and Georgia, over half of the tenants in 1910 were colored, and their numbers aggregated 415,947.¹ Ten years previously the number of colored tenants in the same states was 324,964. The white tenants in these states were outnumbered by colored tenants nearly 2 to 1 in 1910.

The tenants of the Southern states must be sharply distinguished from those in other parts of the country. For the most part they operate cotton farms of twenty acres, are under the supervision of the owner of the farm, are in debt for most of the

1. See next page.

one or two hundred dollars worth of property they own, and are dependent upon lien holders for their subsistence from season to season. In the Northwest the tenant is practically as independent as if he owned the land, owns property worth thousands of dollars, conducts his farm and business operations entirely as suits him. In the East the tenant must engage in highly intensive farming, while in the newer West he is operating land recently taken up from the public domain.²

Somewhat of an indication of the economic status of tenants is afforded by the kind of basis on which they pay rent. The census did not report share-cash tenants separately before 1910 and until that date followed the practice of including the tenant farms whose basis of rental payment was unspecified with the cash tenant farms. The following table shows the difference between the kinds of farm properties operated by the two classes of tenants

1. The data for the seven Southern states where colored tenants were prominent are as follows:

State	Number of tenants				Percentage of			
	Colored		White		Tenants Colored		White farmers Tenants	
	1910	1900	1910	1900	1910	1900	1910	1900
Alabama	93,309	79,901	65,017	48,973	58.3	62.0	42.6	37.9
Arkansas	48,885	34,962	58,381	46,178	45.6	43.1	38.6	36.1
Georgia	106,738	71,243	84,242	63,317	55.9	52.9	50.0	44.6
Mississippi	139,605	107,599	41,886	30,253	76.9	78.0	38.2	37.9
N. Carolina	44,139	37,223	63,148	55,785	41.0	40.0	33.6	32.9
S. Carolina	76,295	66,251	34,926	28,633	68.6	69.8	43.9	40.9
Texas	48,605	45,306	170,970	129,685	22.6	25.0	49.2	45.2

Thirteenth census, V, 210-213.

2. Hibbard, B. H. Quarterly Journal of Economics, 25, 710-711.

which, for the sake of brevity, we may call share and cash.¹

	Acreage		Value of Farm Property				
	Total	Im- proved	Total	Land	Build- ings	Imple- ments and ma- chin- ery	Live stock
Share and share-cash							
1910	93.2	69.1	\$5222	\$3945	\$615	\$131	\$530
1900	92.4	65.0	\$2647	\$1853	\$386	\$89	\$319
Cash and unspecified							
1910	101.7	61.3	\$5613	\$4139	\$710	\$146	\$620
1900	102.9	56.7	\$3003	\$2100	\$423	\$92	\$388

Thirteenth census, V, 100.

1. The relative numbers of the tenants in these classes, and their increase have been as follows:

Cen- sus Year	Number of tenants			Percentage of in-crease over pre-centage of all tenants ceding census renting for			
	Total	Share ¹	Cash ²	Total	Share ¹	Cash ²	Cash ²
1910	2,354,676	1,528,389	826,287	16.3	20.0	9.9	35.2
1900	2,024,964	1,273,299	751,665	56.4	51.5	65.4	37.3
1890	1,294,913	840,254	454,659	26.4	19.7	41.0	35.2
1880	1,024,601	702,244	322,357	....	....	....	31.4

1. Includes "share-cash", separately reported in 1910.

2. Includes "unspecified", separately reported in 1910.

Thirteenth census, V, 102.

It appears that the cash tenants have been operating larger and more valuable farms than the share tenants. The difference in values, however, is not a great one per farm and a still smaller one per acre.

The problem from the point of view of the tenant is however, not so much how valuable a property he operates, but what chances he himself has for accumulating a fund of wealth in the land. There is little doubt that there are tenants who are not in a financial position to own any farm land, though they would regard the buying of land as a desirable and natural step to take. On the other hand there are tenants who, though financially able to own farm land, prefer to invest their expanding capital in other ways than in land.

Ordinarily the members of the first class may be able to choose between operating land as renters, hiring out as farm laborers, or of seeking a livelihood in some pursuit other than agriculture. Outside of the loss and trouble connected with a change from their present status, it may be supposed that they remain farm tenants because of the favorableness of the terms they are able to make with the landlord. Some of these tenants succeed in saving money. Others live such a shiftless, hand-to-mouth existence that they show little evidence of every being able to make much improvement in their condition. The most striking cases of this class of tenants are probably to be found among the poorer negro tenants of the South. Since the owners of the more valuable farmland prefer to rent to the more capable tenants,¹ those who stand lowest in the scale of non-owning tenants will ordinarily tend to gravitate toward the less valuable lands.

1. Taylor, H. C. Introduction to the Study of Agricultural Economics, pp. 59-65. (tural

The second class of tenants includes some of a high economic type, those who regard tenant operation a better means than land ownership for accumulating money. They are in a financial position to seek for, and are of such a character as to attract the attention of owners desiring the higher class of tenants. Once well established, however, they are likely to prefer and to be able to secure longer leases and fairly permanent tenure. Tenants of this class are found mainly in the districts where land prices are high through the acquiescence of owners in a conservative rate of return in annual rent from the land.

On the whole it seems that the transition of which tenancy is the middle stage has, for most farmers, been toward higher rather than toward lower economic conditions.¹ It is the

1. A certain amount of evidence on this problem is afforded by the table below showing the tenure status of farm operators and home occupiers of different age groups. The percentage of farmers who were renters exceeded 50 in the two age groups under 35 in 1890, 1900, and 1910. The older age-groups showed a constantly declining percentage of farmers who were renting, and a corresponding increase in the percentage of farmers who were owning. The indication is, therefore, that advance in age has been associated with advance in status of tenure. The percentage of ownership in the younger age-groups, however, was less in 1910 than in 1900 and less in 1900 than in 1890. It seems that the greater burden of the decline in ownership was being borne by the younger farmers. Owning farmers have been "encumbered" with greater disregard for their age, except that those 55 and over are relatively free from that practice. The age group with the highest percentage of owners encumbered in 1890 was that between 25 and 34, while in 1900 and 1910 the age group, 35 to 44, had the highest percentage, with an increasing concentration on it in 1910. There has been an increasing percentage of the farmers over 55 who have been owners. It is probable that resort to mortgaging by middle-aged farmers has contributed somewhat to this fact.

prevailing belief, however, based upon statistics of tenant farms, "that the stepping-stones of tenancy are getting somewhat farther apart and the passage over them to ownership beyond becoming correspondingly more difficult of accomplishment."¹

Relation of Tenure to Farm Practice

The tenancy practiced by part owners is renting in as true a sense as that carried on by tenants proper. The part owners, however, are usually more fixed to the community and are bound by deed to a part of the land they operate. In the case of "estates" regard for the "old place" and for the other heirs may

Percentage of Farm

Age group	Operators owning farms ¹			Operators who were tenants			Operators owning encumbered farms ¹		
	1910	1900	1890	1910	1900	1890	1910	1900	1890
Aggregate	52.7	64.4	65.9	36.1	35.6	34.1	31.7	31.3	28.2
Under									
25 years	18.6	27.8	32.6	76.5	72.2	67.4	30.3	29.3	21.9
25 to 34	34.7	45.3	49.8	55.1	54.7	50.2	29.5	35.5	31.9
35 to 44	50.2	64.4	64.0	37.3	35.6	36.0	38.4	36.6	31.8
45 to 54	61.4	70.7	72.3	26.8	29.3	27.7	32.9	31.8	30.2
55 and over	73.7	81.4	82.2	19.0	18.6	17.8	22.8	24.6	22.6
55 to 64	70.0	79.0	....	21.1	21.0	....	26.1	27.6	....
65 and over	79.7	84.9	....	15.1	15.1	....	16.8	20.6	....
Unknown	57.9	55.6	....	31.8	44.4	....	12.6	23.8	....

1. Excluding part owners.

United States census reports:

Thirteenth, Bulletin on Age of Farmers, 9, 22;
Twelfth, Population, Part II, ccxi.

1. Hibbard, B. H., Annals of the American Academy, 40, 29-39.

prevent the heir in charge of the estate from varying the treatment between the land he owns and that which he rents. The expectation of eventual ownership of the rented land is usually greater in the case of part owners than in the case of most tenants, and this exerts an influence in the same direction. Farming by part owners, in such cases, surely differs little from that conducted by those owning all the land they operate.

At the Twelfth census farms were classified according to principal source of income, and by various forms of tenure.¹ From this investigation it appears that in 1900 managerial operation was relatively most prominent in the case of farms whose principal source of income was fruits, dairy produce, rice, sugar, flowers, plants, and nursery products. Tenants were relatively most prominent in the production of vegetables, tobacco and cotton. In the case of hay and grain farming part owners and share tenants operated more than their share. Livestock farming was carried on by "owners and tenants", by part owners and by owners, to a disproportionately large extent. The table on the next page affords the basis for the statements made in this paragraph.

It appears that while hay and grain was given greatest relative emphasis by the share tenants and part owners, livestock raising was more largely practiced by the "owners and tenants", owners proper, and part owners; and dairying was carried on chiefly

1. The percentage of farms listed under each principal source of income was as follows: hay and grain, 23.0; vegetables, 2.7; fruits, 1.4; livestock, 27.3; dairy produce, 6.2; tobacco, 1.9; cotton, 18.7; rice, 0.1; sugar, 0.1; flowers and plants, 0.1; nursery products, less than 0.1; and miscellaneous, 18.5.

Percentage of farms of specified principal
source of income, operated under specified
forms of tenure, United States, 1900.

	All ten- ures	Own- ers	Part own- ers	Own- ers and ten- ants	Mana- gers	Cash ten- ants	Share ten- ants
All farms	100.0	54.9	7.9	0.9	1.0	13.1	22.2
Hay and Grain	100.0	48.0	10.7	0.9	1.1	10.1	29.2
Vegetables	100.0	60.4	7.2	0.7	1.3	18.9	11.5
Fruits	100.0	71.7	6.5	0.8	4.5	7.6	8.9
Livestock	100.0	66.9	10.3	1.3	1.2	7.6	12.7
Dairy Produce	100.0	69.9	5.4	0.7	1.7	12.5	10.8
Tobacco	100.0	44.6	5.4	1.5	0.6	8.9	39.0
Cotton	100.0	28.2	3.4	0.3	0.4	29.4	38.3
Rice	100.0	44.2	7.0	0.4	2.7	24.2	21.5
Sugar	100.0	50.6	8.0	0.6	5.7	15.2	19.8
Flowers and Plants	100.0	77.3	4.6	0.6	2.8	13.2	1.5
Nursery Products	100.0	68.4	14.6	0.4	3.9	10.0	2.7
Taro	100.0	47.8	7.3	...	0.5	38.5	5.9
Coffee	100.0	34.2	8.4	...	3.5	49.6	4.3
Miscellaneous	100.0	66.9	6.4	1.0	0.8	8.7	16.2

Twelfth census, V, lv.

by the owners. The tenants, therefore, have been tending to concentrate on the production of staple products, managers in the lines requiring great emphasis on supervision of labor force, while ownership seems to have been associated with a more highly diversified and capitalized form of farming industry. From the point of view of farm practice, tenure is an expression of the adaptation of the operator to the requirements of the type of farming, and to some extent, doubtless, the adjustment of farm practice by the operators to suit the requirements of their form of tenure.

Land makes demands upon farmers either for capital to own it or for capital and skill to operate it. High prices for

the land do not in themselves induce tenant-farming,¹ unless the purposes to which such land may be put are such that tenants can qualify as operators. If large-scale production is at a premium on the high-priced land, then the standardization of farming method and the costliness of farm ownership may make for tenant cultivation. In any case, financial and technical qualifications of the tenants to carry on the type of farming to which the land is adapted are prerequisite to the prevalence of tenancy.

The importance to the tenant of technical knowledge and of capital goods is especially to be noted when there is a change in the type of farming prevailing in a region. The introduction of cereal growing into certain parts of the South has caused a temporary withdrawal of tenants from operation there.² Cereal growing, where an established feature of the agriculture of a region, is ordinarily practiced to a high degree by the tenants. As the methods of grain farming become widely known in the Southern districts introducing it and the investments in equipment established, we may expect the same association between tenancy and cereal growing there as in other parts of the country.

Lack of adequate capital to invest in the ownership of land tends to increase the supply of tenants when the methods of farming the land are standardized and well known. Persons with

1. The price of land and the size of farms are given considerable emphasis in the writings of most of those treating the subject of tenancy. See particularly Taylor, H. C., Introduction to the Study of Agricultural Economics, 244-250; Hibbard, B. H., Annals of the American Academy, 40, 29-39, and Quarterly Journal of Economics, 25, 712-719; 26, 107-109, 364-369; 27, 483.

2. Community Service Week in North Carolina, p. 44.

adequate knowledge of farming method seek to manage, rent or own in part (possibly under mortgage) farms for the complete and unencumbered ownership of which they lack sufficient capital.

The importance of the influence of both these factors, the lack of capital for land purchase in increasing tenancy and the lack of operating capital and efficiency in decreasing tenancy, must continue to grow as heavier demands are made for capital and operating efficiency. The annual gain to the landlord from unearned increment must constitute a diminishing percentage of the value of the land and of the total annual increase in the landlord's wealth.¹ Great emphasis must, therefore, be placed upon operating efficiency in increasing farm incomes. The landlords may be expected to apply more thorough-going tests of the farming ability of the tenants. This will not only tend to hold tenancy in abeyance, but will accompany a regime of better farming by those operating under all forms of tenures.

Recent Changes in Fundamental Land Conditions

Land tenure may, in a general way, be regarded as an expression of the relation of the population to the supply of cultivable land. From 1850 to 1880 the acreage of improved land in American farms increased 151.9 per cent, while population increased 116.3 per cent.² The improved acreage per capita was 4.9 in 1850 and 5.7 in 1880. From 1880 to 1910 the population increased 83.4, while the percentage of increase in the improved

1. See below, pages 92 and 163.

2. See table on next page.

Cen- sus Year	Per capita acreage of land in farms		Percentage of increase over preceding census				Value of Farm Property			
	Total	Im- proved	Pop- ula- tion	Num- ber of farms	Acreage of land in farms		Land and build- ings			
					Total	Im- proved	Total	ings	Imple- ments and mach- inery	Live stock
1910	9.6	5.2	21.0	10.9	4.8	15.4	100.5	109.5	68.7	60.1
1900	11.0	5.5	20.7	25.7	34.6	15.9	27.1	25.1	51.7	33.2
1890	9.9	5.7	25.5	13.9	16.3	26.6	32.0	30.2	21.6	45.4
1880	10.7	5.7	30.1	50.7	31.5	50.7	36.2	37.0	50.1	28.2
1870	10.6	4.9	22.6	30.1	0.1	15.8	12.1	12.0	10.1	12.9
1860	13.0	5.2	35.6	41.1	38.7	44.3	101.2	103.1	63.4	100.2
1850	12.7	4.9	....	....	....	....	.....	.....	....	.....

During thirty year periods

1880 - 1910	83.4	58.7	63.9	68.0	236.5	241.3	221.2	212.3
1850 - 1880	116.3	176.7	82.6	151.9	207.0	211.7	168.2	189.0

Thirteenth census, V, 51, 57.

farm acreage was 68.0, while the percentage of increase in the improved land per capita in 1910 was 5.2. The improved acreage represented 53.1 per cent of the land in farms in 1880 as against 38.5 per cent in 1850 and 54.4 per cent in 1910. But for an extraordinary expansion in the unimproved acreage just preceding 1900, the acreage of all land in farms per capita would probably have shown a tendency to decline after 1880 in the same way as the improved acreage. The evidence seems to indicate that a coming scarcity was evident in the supply of land capable of being cheaply brought into profitable cultivation and the expansion of the farm area between 1890 and 1900 was probably due, in a measure, to the belief on the part of some persons that it was best to get desirable new land before it became too late.¹ From 1900 to 1910 the

1. The percentage of the land area in farms in 1910 was 46.2, 1900, 44.1, and 1890, 32.7. More significance is to be

expansion of the farm area probably necessitated resort to somewhat inferior types of soil, and as a consequence more attention was paid to improving the acreage already in farms. The relative increase in the ratio of improved land to all farm land was greater between 1900 and 1910 than for any decade ending after 1880. An increasing demand for the products of a given area of land is indicated by the rise in price of farm products, which affected the profits of farming and the price of farm land. The relative increase in the value of land and buildings per acre was greater during the decade 1900 to 1910, than during any other census decade of the sixty years.

The effect upon land prices was probably greatest in the case of land producing staple products the area of production of which had previously been expanding more nearly in response to the demand for the products. The effect was not so important, therefore, in the case of cotton lands, but was very pronounced in the case of land producing the important cereals.

The relation of land prices to tenure during the recent decades can be best examined, therefore, in the case of cereal-growing districts. That will be done here for the state of Illinois.

 attached to the smallness of the increase between 1900 and 1910, perhaps, than to the fact that over half of the land has not been included in farms.

CHAPTER III

TENDENCIES IN THE AGRICULTURAL ECONOMY OF ILLINOIS

It is impossible to understand the agricultural economy of a state like Illinois without keeping constantly in mind the physical features and soil conditions which give character to the state. The accompanying physical and soil maps, therefore, should be given frequent reference in reading this discussion.

Physiography and Timber

The surface of Illinois, for the most part, slopes gently from the north to the south, except in the extreme Southern part of the state where a spur of the Ozark hills rises rather abruptly from the plains to an altitude of approximately one thousand feet. The altitude along the rivers in the Southern part of the state is about three hundred feet above sea level, in the Central part between seven and eight hundred feet, and in the Northern part about one thousand feet.

The state has a variety of soils, as indicated by the soil map.¹ Unglaciated areas are to be found in three portions of the state - in the Southern part, where the Ozark hills appear to have obstructed the progress of the glaciers; in the point of land between the Illinois and Mississippi rivers; and in the Northwestern corner of the state. All the rest of the state has been glaciated at least once, and some sections were covered a number of times.

The profound influence of the glaciers upon Illinois agriculture was exerted through their effect upon the topography

1. See below, page 169.

and to a less extent, perhaps, upon the quality of the soil.¹ The difference in yields per acre in the various glaciated districts is considerable, but the difference in land prices is much greater. The unglaciated regions, being more broken, are less suited to cultivation by modern farm machinery and to hauling heavy loads. The glaciated regions have better water supply, and suffer less change in the fertility of the soil because of erosion.²

The extent of the timber growth in the various parts of the state affords a good index of the general physiographic conditions. The mere presence of natural timbers usually implies that the land is either broken or swampy. This fact alone would tend to cause the timber land to be less easily cultivated, even when cleared. There is the further fact that timber operated against the accumulation of the organic elements so important for the growing of crops.³ This is attested by the fact that while the productiveness of the timber land was somewhat improved after it was cleared, the distinction between the old timber land and

1. The dominant soil type in all but Southern Illinois, is a dark brown to black silty loam underlaid by a yellow gray, or drab stiff silty loam subsoil. Associated with it, and particularly in the timbered areas along the streams, is a yellow to yellowish-brown silty loam surface underlaid by a yellow silty subsoil.

In Southern Illinois the deposit of loess over the underlying glacial materials is thin. The soil in Southern Illinois is principally a gray silt loam underlaid by a stiff gray silty clay.

See Thirteenth census, V, 897-898.

2. Mosier, J. G., Effect of Glaciers on Illinois Agriculture. Illinois Agriculturist, June, 1914, pages 533 and 534.

3. Upon the withdrawal of the last glacial sheet the presumption is that the grasses were first among the vegetation growths to cover the land of the state. The area covered by trees, first limited to the unglaciated district, came to include more and more of the glaciated soil. The previous

that of the old prairie land still stands out with appreciable sharpness. Just what portion of the difference in fertility in different sections is due to the fact of former timber influence and what portion is to be explained by geological formation, is, of course, indeterminate. The sharpest line of demarcation between soils in Illinois, when considered from the point of view of productiveness, is found, however, where the same line divides an old timbered from an old prairie district, and at the same time a district of a later from that of an earlier glaciation.¹ This line may be roughly indicated as running from East St. Louis to Shelbyville, the seat of Shelby county, and thence east to the northwest corner of Clark county. South of this line the country was once nearly all covered with timber, while to the north the original forest was for the most part confined to the belts following the principal waterways.²

The Timber Farm Economy

The timber was not only an index and feature of the physiography of the Illinois country, but was important in its

 occupation of the land by the grasses made it more difficult for the seeds of trees to get into the soil, and the fires which burnt the grass periodically tended to destroy the incipient timber growth. The organic elements which worked into the soil as a consequence of the decay of the grasses are said to have made the soil still less hospitable to the growth of timber. The hardier, scrubbier types of woodland growth could make their way somewhat better through this soil than the more characteristic types of timber. As the hardier types gained possession of the land, they reduced the hostile elements and made it possible for the other types to follow them. The expansion of the timber over the grass lands must have been very slow for it lacked much of being complete when the settlement of the prairie stopped it.

1. Hall and Ingall, Forest Conditions in Illinois, p. 195.

2. Ibid, 195.

influence upon early settlement and pioneer farm economy. The decided preference of the early settlers for woodland is supported by evidence in the recorded history of nearly every Illinois county.¹ For the raising of hogs the mast of the woods and for the raising of cattle woodland shade and pasture were, during most of the year, superior to the natural or cultivated products which might, with satisfactory drainage, have been produced on the prairie. To be sure, a certain amount of hay and grain was necessary to tide the horses, hogs and cattle over the winter season, and some grain and hemp or flax was needed to feed and

1. This is explained by a number of facts. The early settler had to have some land which was higher than the general level. This was necessary, first, to escape the ponds which covered the flat lands during the rainy seasons, producing malaria and making travel in and out difficult, and second, to be safe from the fires which swept the prairies in the dry seasons. Where high spots were found, timber was usually on them. The better drained land was ordinarily more broken and timbered. The woods afforded the source of fuel and of materials for stockades, houses, barns and fences, the overland transportation of which, whether as logs or rails, was a difficult matter, particularly in the wet seasons. The woods were usually to be found associated with rivers, springs and salt licks. The rivers were often the avenues by means of which settlers pushed on and by which they communicated with the markets and post offices. The springs afforded the source of water for the settlers and for the animals they kept or hunted. The salt licks provided a necessary article for the household and for the domestic animals, and of all places in the woods were probably the most strategic for killing wild game. Furthermore, the surrounding woods provided shelter from the extremes of the weather for both man and beast.

Among settlers for whom the woodland held such a monopoly of the indispensable conditions of pioneer life it is little wonder that a prejudice arose against the open prairie. Some of this prejudice may have been brought with them from their former homes farther East. The kind of economic life to which lack of drainage and transportation facilities subjected them would only tend to strengthen such prejudice.

clothe the settlers themselves. The amount of arable land sufficient to these purposes, however, was easily cleared, or fenced in from a natural clearing in the woods or from the edge of the prairie. It was the timber, nevertheless, that was the indispensable basis of the pioneer agricultural economy, while the prairie, beyond what lay contiguous to the timber, afforded menaces by fire and by water, in the shape of disease and death. There is little wonder, then, that the prairie was looked upon by the pioneers as a hopeless waste.¹

Tendencies in Population in Illinois

In order to sketch the development of Illinois we may employ several lines of census data.

From the population statistics in the following table, ~~supplemented by the Illinois quinquennial census data given in the appendix~~, a fair notion of the rate of this development may be drawn.

1. It is sometimes said that the early settlers held the theory that the prairie was less fertile than the timber land, because the prairie grew vegetation that was much smaller. Owing to the conditions confronting the settlers, however, this theory could not have restrained them much until the improvements took place in transportation, in agricultural machinery and in drainage. When it became possible to till the land, to produce extensively and to market products other than those which could be driven on foot, cultivation of the prairies became at once possible and profitable. It is, of course, possible that some farmers should have insisted on clearing timber land, thinking that they would thus farm the richest land, when a vast area of richer prairie lay all ready to be tilled and broken up, but the view that the prairies were less fertile than the timber land probably did not restrain prairie cultivation to any great extent.

Census Year	Population	Increase over preceding census		Per cent of increase for United States
		Number	Per cent	
1910	5,638,591	817,041	16.9	21.0
1900	4,821,550	995,198	26.0	20.7
1890	3,826,352	748,481	24.3	25.5
1880	3,077,871	537,980	21.2	30.1 (26.0)*
1870	2,539,891	827,940	48.4	22.6 (26.6)*
1860	1,711,951	860,481	101.1	35.6
1850	851,470	375,287	78.8	35.9
1840	476,183	318,738	202.4	32.7
1830	157,445	102,234	185.2	33.5
1820	55,211	42,929	349.5	33.1
1810 x	12,282	9,824	399.7	36.4
1900 xx	2,458	.....	.....	.....

Thirteenth census, I, 24, and V, 436.

x From 1809 to 1818 Illinois was a "territory".

xx For the three counties of the "Territory of Indiana", embracing the area known as Illinois since 1809.

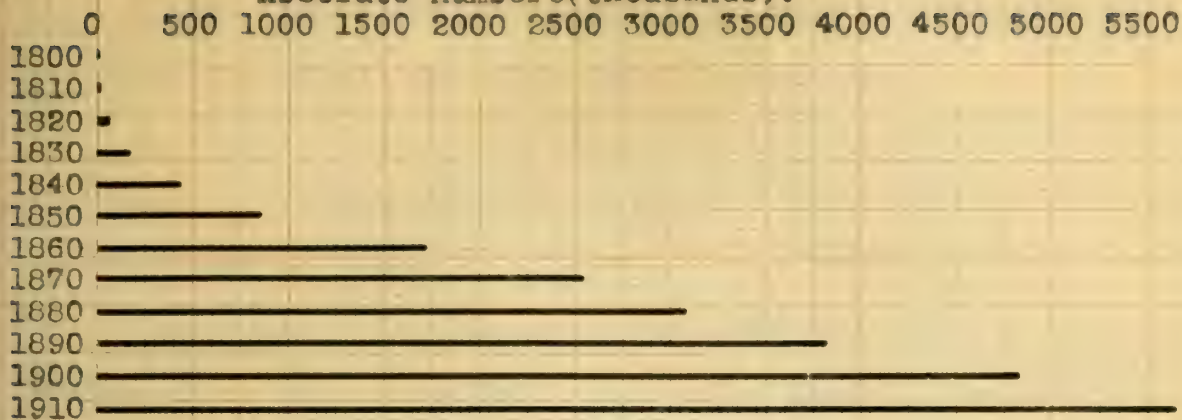
* Corrected figures, as explained, Census, 1900, I, 24.

The population multiplied 459 times between 1810 and 1910. The periods of most marked absolute growth in population were from 1850 to 1870, and from 1890 to 1910. In relative increase the decades prior to 1840 took the lead, although a remarkable increase occurred from 1850 to 1860. The period of least relative increase in population was the one between 1900 and 1910. Until 1870 the rate of increase in population in Illinois exceeded that of the nation as a whole during each decade. This was likewise true of the decade 1890 to 1900. From 1870 to 1890 and from 1900 to 1910, however, the rate of increase of population fell below that of the United States. The percentage of increase in the population of Illinois was least from 1900 to 1910 of any decade in the history of the state. As a whole, however, the population growth was very great, especially until about 1870.

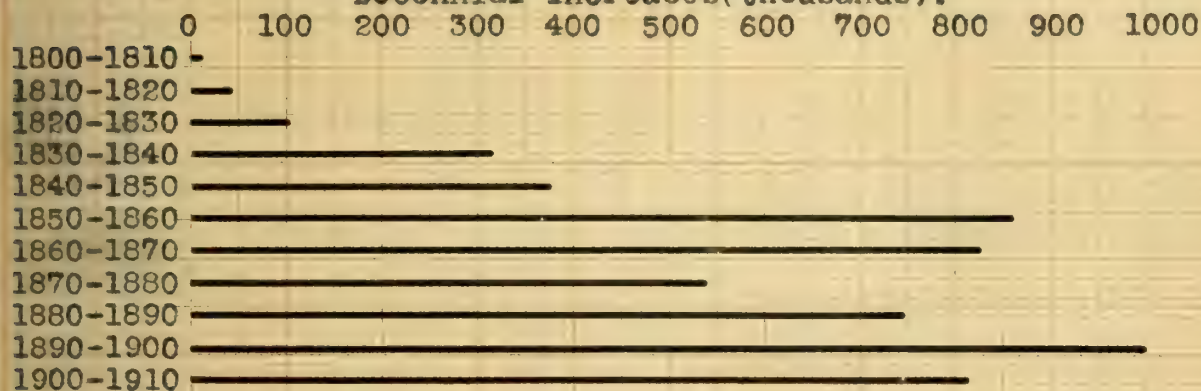
POPULATION OF ILLINOIS, 1800- 1910.

PLATE I.

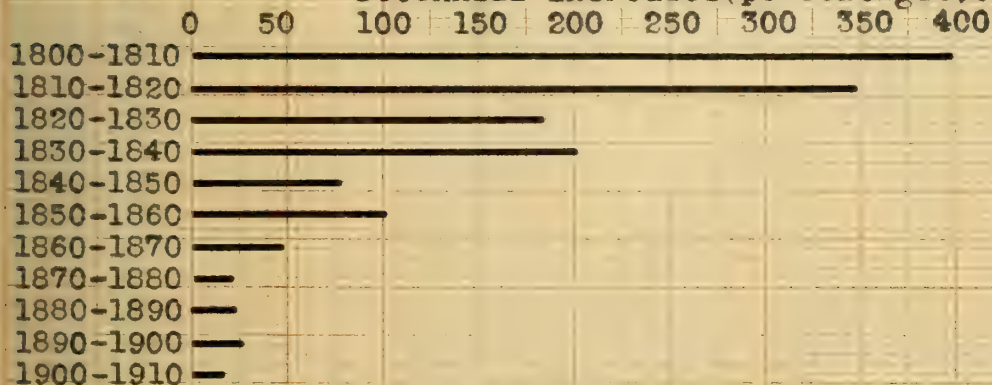
Absolute numbers(thousands).



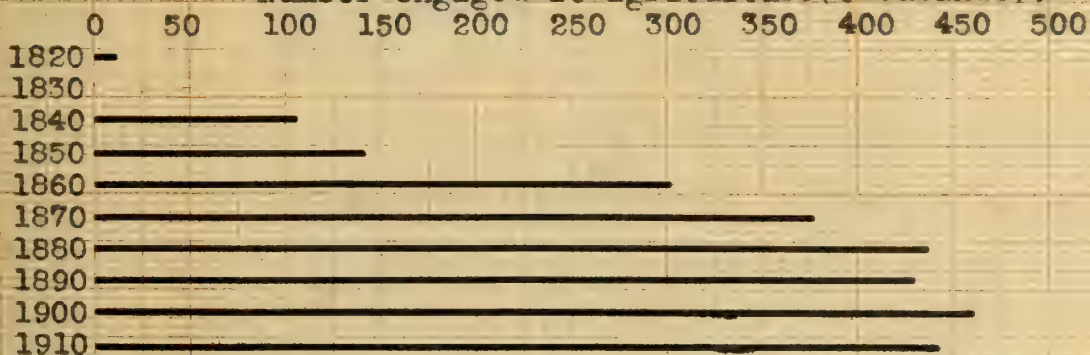
Decennial increases(thousands).



Decennial increases(percentages).



Number engaged at agriculture(thousands).



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It is possible to determine the extent of the agricultural population of the state in only a rough way.

Statistics of occupations were taken in 1820 and from 1840 to 1910. The table on the next page has been prepared from the limited data at hand.

In Illinois in 1820, and from 1870 to 1910 the percentage of population in the occupations was below that of the entire country, rising steadily, however, from 24.7 in 1820 to 40.7 in 1910.

Starting with 90.9 per cent of the occupied population engaged in agriculture in 1820, this predominance of the agricultural occupation in Illinois has suffered a remarkable decline. The virtual absence of slaves in Illinois in 1850 and 1860 leaves a greater comparative value in the occupation statistics for those dates in the case of Illinois than for the country as a whole. The decline in the percentage of occupied persons who were in agriculture was less abrupt in Illinois between 1860 and 1870, due no doubt to the fact that the number of persons in Illinois agriculture had its greatest decennial increase during that period. Up to and including 1870 a larger portion of the population of Illinois had been engaged in agriculture than in the country as a whole. Between 1870 and 1880, however, the growth of other industries in the state was so marked, and since 1880, the number engaged in agriculture has undergone so little change that from 1880 to 1910 the percentage of population devoted to agriculture in Illinois was less than the corresponding percentage for the United States, and was decreasing much more rapidly. From

Cen- sus Year	Total population	Number in all occupations	Persons in agri- culture	Percentage of Occupied population in agriculture			
				Population occupied United States ¹	Illi- nois	United States ¹	Illi- nois
1910b	5,638,591	2,296,778	444,242	41.5	40.7	32.4	19.3
1900b	4,821,550	1,804,040	461,014	38.3	37.4	35.3	25.6
1890b	3,826,352	1,353,559	430,134	36.1	35.4	37.2	31.8
1880b	3,077,871	999,780	436,312	34.7	32.5	44.1	43.6
1870b	2,539,891	742,015	376,325	32.4	29.2	47.4	50.7
1860c	1,711,951	395,937	301,893	26.4	23.1	40.4	51.0
1850d	851,470	215,359	141,099	23.2	25.3	44.8	65.5
1840e	476,183	124,204	105,337	21.8	26.1	77.5	84.8
1820e	157,445 55,162	13,635	12,395	25.8	24.7	83.0	90.9

1. See Appendix, page

- (a) Exclusive of lumbermen, raftsmen, woodchoppers, apiarists, fishermen, oystermen, foresters, owners and managers of log and timber camps, and those in other agricultural and animal husbandry pursuits, so far as separately reported.
- (b) Males and females over ten years of age.
- (c) Free males and females over fifteen years of age.
- (d) Free males over fifteen years of age.
- (e) Males and females, free and slave, all ages.

United States census reports as follows:

- 1910: Thirteenth, I, 30-31, and IV, 91 and 97.
- 1900, 1890, 1880 and 1870: Twelfth, Occupations, Introduction, 1 (following xlix); also
- 1900: Twelfth, Occupations, 124.
- 1890: Eleventh, Part II, Population, 304 and 314.
- 1880: Tenth, Population, 777 and 793.
- 1870: Ninth, Population and Social Statistics, 704 and 731.
- 1860 and 1850: Twelfth, Occupations, Introduction, liii; also
- 1860: Eighth, Population, 104-105, and 680.
- 1850: Seventh, lxx-lxxix, and 727.
- 1840 and 1820: Twelfth, Occupations, Introduction, xxx; also
- 1840: Sixth, 396 and 475.
- 1820: Fourth, Sheet 40.

1820 to 1910 the percentage of the total population in Illinois in agriculture decreased from 90.9 to 19.3.

The changes in the population of Illinois from 1890 to 1910 are analyzed in the following table.¹

1. See below, page 244, for a different set of figures.

Cen- sus Year	Total Popu- lation	Urban terri- tory	Population in		Percentage of total population in		
			places of under 2500 inhabitants	Other rural territory	Urban terri- tory	Places under 2500	Other rural terri- tory
1910	5,638,591	3,476,929	675,240	1,486,422	61.7	12.0	26.4
1900	4,821,550	2,616,368	606,797	1,598,385	54.3	12.6	33.2
1890	3,826,352	1,714,223	485,220	1,626,909	44.8	12.7	42.5

Thirteenth census, II, 438.

In this table it appears that, while the urban and small town population has been growing, both relatively and absolutely, the population in strictly rural territory has been both relatively and absolutely declining. The number of inhabitants of strictly rural territory per square mile of the total land area was 29.1 in 1890 and 24.8 in 1910. There were 16.2 per cent more people in the strictly rural territory in 1890 than in 1910.

The Increase in Farms and Farm Area

Of the thirty-two million acres of land in Illinois farms probably not over two million were taken up by 1820.¹ During the next thirty years approximately ten million acres were added to the farm area. As may be inferred from the data on page 171 most of the land taken into Illinois farms during the first half of the nineteenth century was in the wooded districts of the state. The

1. In American State Papers, Public Lands, Volume III, p. 533, it appears that the five land agencies in Illinois, located at Shawneetown, Kaskaskia, Edwardsville, Palestine, and Vandalia, had reported to October 1, 1821, as follows:

Lands surveyed	13,799,040
Reservations - private claims.	529,046
Amount sold	1,458,992
Unsold	12,160,992

following table shows the agricultural development of the state beginning with 1850.

Land in farms

Cen- sus date	Total Acres	Per cent of inc. ¹	Improved Acres	Per cent of inc. ¹	
1910	32,522,937	-0.8	28,048,323	8.0	1.3
1900	32,794,728	7.5	27,699,219	12.7	7.9
1890	30,498,277	-3.7	25,669,060	-5.9	-1.7
1880	31,673,645	22.4	26,115,154	28.6	35.1
1870	25,882,861	23.8	19,329,852	21.1	47.6
1860	20,911,989	73.7	13,096,374	16.0	159.9
1850	12,037,412	....	5,039,545	....	....

v 5 ↑ 69.

Cen- sus date	Per cent of Land area in farms	Farm land im- proved	Number of farms Total	Per cent of inc. ¹	Average number of acres per farm
1910	90.7	86.2	251,872	-4.6	129.1
1900	91.4	84.5	264,151	9.8	124.2
1890	85.0	84.2	240,681	-5.9	126.7
1880	88.3	82.5	255,741	26.1	123.8
1870	72.2	74.7	202,803	41.5	127.6
1860	58.3	62.6	143,310	88.1	145.9
1850	33.6	41.9	76,208	....	158.0

(1) A minus sign (-) denotes decrease.

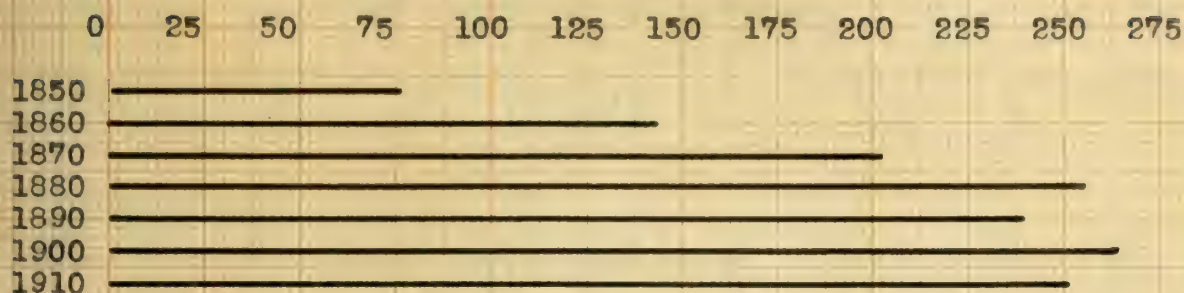
Thirteenth census, VI, 412-413.

The percentage of land in farms increased from 33.6 in 1850 to 91.4 in 1900, falling back to 90.7 in 1910. The percentage of farm land that was improved increased steadily from 41.9 in 1850 to 86.2 in 1910.

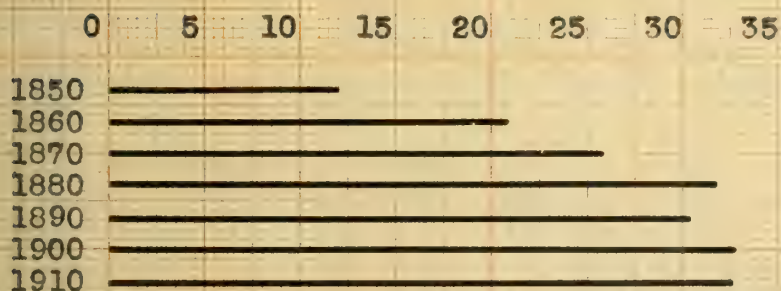
During the decades before 1880 the amount of land in farms grew by large decennial increments, the total increase from 1850 to 1880 being 163.1 per cent. During the thirty years

ILLINOIS FARMS AND FARM LANDS, 1850-1910.

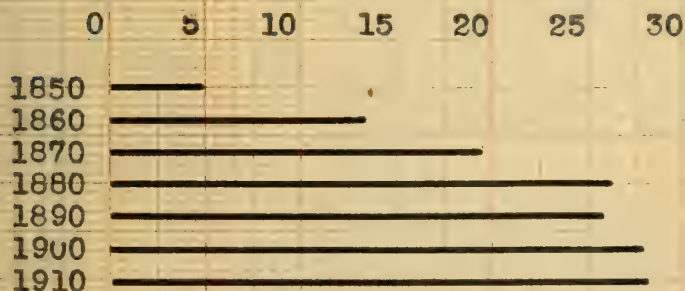
Number of farms(ten thousands).



Total number of acres in farms(millions).



Number of improved acres in farms(millions).



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following 1880 the area of land in farms increased only 2.7 per cent, and actually declined during two decades. The acreage of improved land increased 418.2 per cent between 1850 and 1880, and only 7.4 per cent from 1880 to 1910. The farms were decreasing in average size from 1850 to 1880, but have been increasing somewhat since 1880.¹

The year 1880, therefore, stands as the turning point in the direction in which the average acreage of farms was moving and marked the end of the large relative decennial increases in the

1. The following table shows the distribution of farms among the different size-groups in Illinois from 1860 to 1910.

	All sizes	Under 3	3 to 9	Under 10	10 to 19	20 to 49	50 to 99	100 to 174	175 to 249	250 to 499	100 to 499	500 to 1000	Over 1000
1910	100.0	0.3	3.6	3.9	4.1	13.2	23.0	32.0	15.2	7.7	54.9	0.7	0.1
1900	100.0	0.7	2.7	3.4	4.0	15.6	24.9	30.8	13.5	6.9	51.2	0.8	0.1
1890	100.0	...	...	1.8	2.9	15.9	28.6	....	....	...	49.7	1.0	0.2
1880	100.0	0.1	1.6	1.7	3.2	18.2	29.7	....	....	...	45.6	1.3	0.3
1870*	100.0	(1)	1.8	1.8	5.0	26.3	33.6	....	....	...	32.5	0.7	0.1
1860*	100.0	...	1.3	1.3	4.6	26.8	34.4	....	....	...	32.0	0.7	0.1

(1) Less than 0.05.

* Improved land only. The total number of farms containing improved land in 1860 was ~~142,838,972~~ short of the total number of farms.

United States census reports: Thirteenth, VI, 415; Eleventh, Agriculture, 118, and Tenth, Agriculture, 26, 27.

It will be observed that from 1880 to 1910 the percentage of farms under 20 acres in size increased from 4.9 to 8.0; those between 20 and 100 acres declined from 47.9 to 36.2; those between 100 and 500 acres increased from 45.6 to 54.9, and those over 500 acres declined from 1.6 to 0.8. In 1910 approximately one-third of the farms had between 100 and 175 acres.

total and improved farm acreages, and the number of farms and of persons engaged in agriculture. Until 1880 the changes in Illinois agriculture were mainly in the area of farm land and the number of farms and farmers; since 1880 the greater changes have been in productions and values.

Values of Farm Properties

To illustrate the tendencies in the elements which went to make up the values in farm properties, the following table has been prepared.

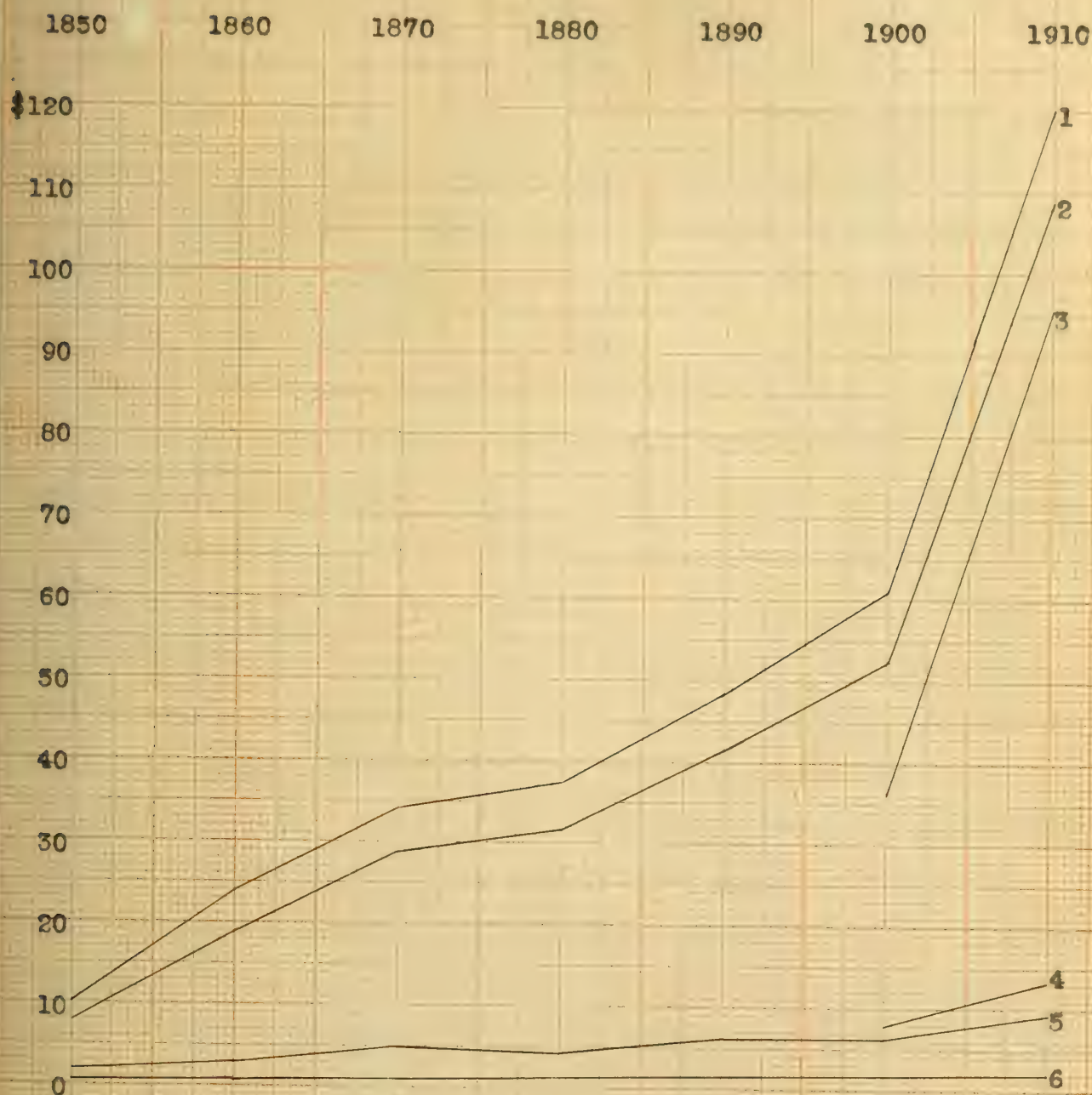
Average value per acre of land in Illinois farms of

Cen- sus date	All farm prop- erty	Per cent of incr.	Land and build- ings ¹	Per cent of incr.	Imple- ments and mach'y	Per cent of incr.	Live stock	Per cent of incr.	Index num- ber
1910	\$120.08	96.5	\$108.32	101.2	\$2.27	65.7	\$9.49	60.6	107.9
1900	61.12	26.2	53.84	30.0	1.37	21.2	5.91	0.2	91.2
1890	48.45	30.5	41.41	29.9	1.13	5.6	5.92	41.6	92.3
1880	37.12	8.7	31.87	12.0	1.07	0.0	4.18	9.7	106.9
1870 ²	34.15	43.2	28.45	45.4	1.07	30.5	4.63	33.4	117.3
1860	23.85	126.5	19.56	144.8	0.82	54.7	3.47	72.6	100.0
1850	10.53	.....	7.49	.....	0.53	....	2.01	....	101.0

Thirteenth census, VI, 413.

1. Land and improvements, except buildings: 1910, \$95.02; 1900, \$46.17; percentage of increase, 104.3.
Buildings, alone: 1910, \$13.30; 1900, \$7.67; percentage of increase, 70.6.
2. Computed gold values, being 80 per cent of the currency values reported.
3. The index numbers presented here follow the Falkner series from 1860 to 1900. A number for 1850 is supplied from the calculations of G. H. Knibbs as employed by Irving Fisher. A ratio of comparison between the Falkner series and that used in the investigation of the United States Department of Labor was derived for 1890 and 1900 and a number as of the Falkner series calculated for 1910.
(See Fisher, Irving: Why is the Dollar Shrinking, 150-163; Aldrich Report on Wholesale Prices, Wages, and Transportation; Bulletin of the Bureau of Labor Statistics, Wholesale Prices, 1890 to 1912).

DIAGRAM SHOWING CHANGES IN THE AVERAGE VALUE PER ACRE OF FARM PROPERTY, ILLINOIS, 1850-1910.



1. All farm property
2. Land and improvements including buildings
3. Land and improvements except buildings
4. Buildings alone
5. Implements and machinery
6. Live stock

The data on average value per acre of the properties under consideration indicate a persistent rise. Even though the rise in these values may have been promoted from 1860 to 1870 and from 1900 to 1910 by the fall in the purchasing power of money during those decades of 17.3 and 18.3 per cent respectively, the movement of farm values was much more rapid than that of the general price level. During the period 1870 to 1900 the farm property values underwent increases in spite of the fall of 22.3 per cent in the general price level.

The largest decennial increments of value in the case of each item of property took place between 1900 and 1910, and the percentages of increase during that decade, even after allowance is made for the rise in the general price level, was greater than those of any other decade since 1860. In both absolute and relative increase in all items the decade, 1870 to 1880, stands lowest among the periods. The period, 1870 to 1890, was one of small increases, compared with the twenty year periods preceding and following it. During the thirty year period, 1850 to 1880, the increase in the value of land and buildings exceeded that which took place between 1880 and 1910, although the increase in the value of implements and machinery and of live stock was greater during the latter period.¹ During the entire sixty years

1. Percentage of increase in the value of

Periods	All farm property	Land and buildings	Implements and machinery	Live stock
1890 - 1910	147.8	161.6	100.9	60.3
1870 - 1890	41.9	45.5	5.6	27.9
1850 - 1870	224.3	256.1	101.9	130.3
1880 - 1910	223.5	241.8	112.1	127.0
1850 - 1880	252.4	298.9	101.9	108.0

all farm property underwent an increase in value per acre of 1040 per cent, and the component items increased as follows: land and buildings, 1256 per cent; implements and machinery, 328; and live stock, 372.

The rise in the value of farm property appears to have been accelerated about 1880 and again about 1900. This was more especially true of the land than of the other forms of farm property.

No less significant, perhaps, is the change in the relative prominence of value per acre of the different forms of farm property in Illinois. The following table shows for each of the last seven census dates the percentage of the total value of farm property contributed by specified kinds.

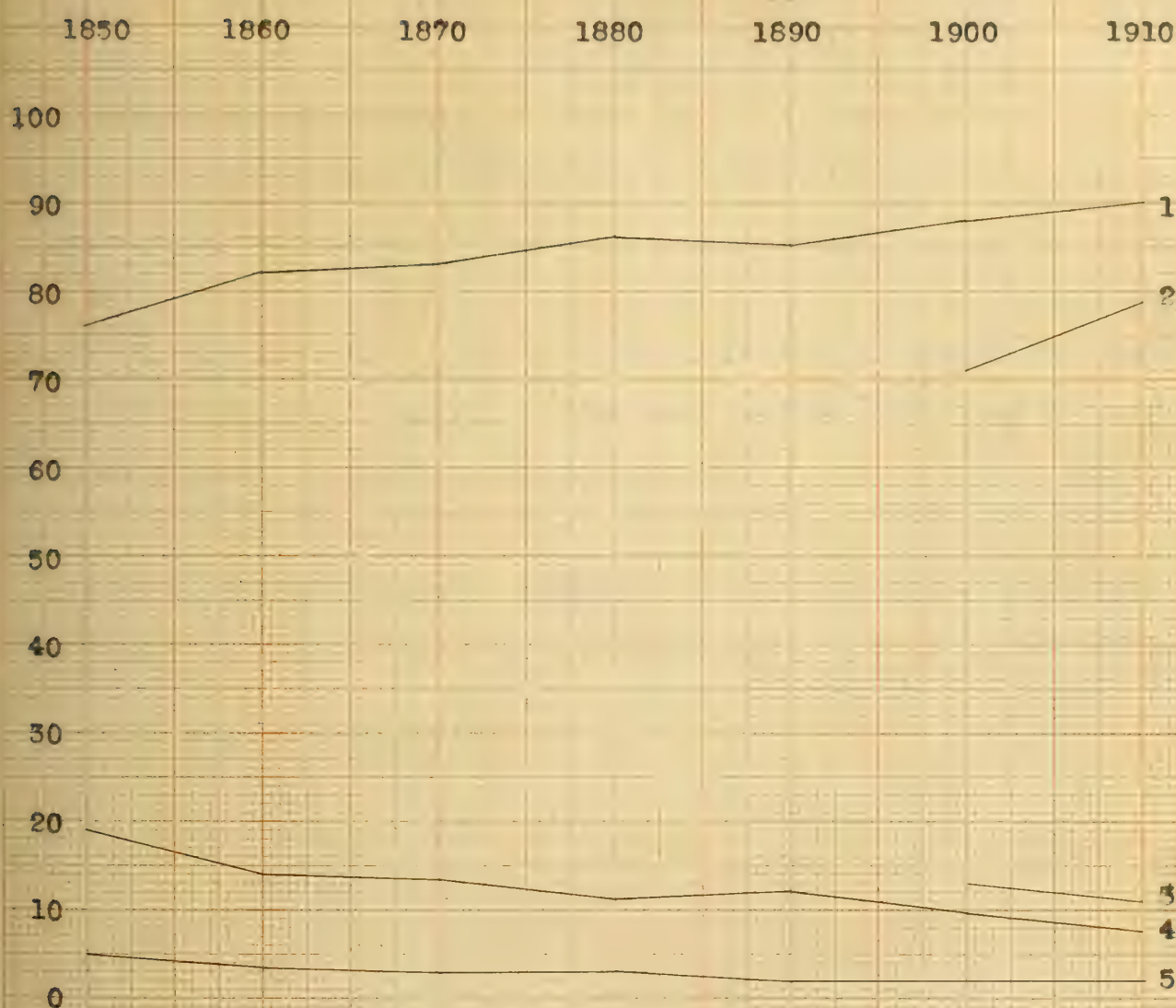
Census Year	All farm property	Land and buildings ¹	Imple- ments and machinery	Live stock
1910	100.0	90.2	1.9	7.9
1900	100.0	88.1	2.2	9.7
1890	100.0	85.5	2.3	12.2
1880	100.0	85.9	2.9	11.3
1870	100.0	83.3	3.1	13.6
1860	100.0	82.0	3.5	14.5
1850	100.0	75.9	5.1	19.1

Thirteenth census, V, 93.

1.	Date	1910	1900
	Land and improvements .. (except buildings)	79.1	75.6
	Buildings	11.1	12.5

The prominence of implements and machinery and of live stock as measured by their portion in the total value of all farm property was two and a half times greater in 1850 than in 1910. The part taken by the value of the land, however, rose from

DIAGRAM SHOWING THE PERCENTAGE OF THE VALUE OF FARM
PROPERTY PER ACRE REPRESENTED BY EACH ELEMENT,
ILLINOIS, 1850-1910.



1. Land and improvements including buildings
2. Land and improvements except buildings
3. Buildings alone
4. Implements and machinery
5. Live stock

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three-fourths in 1850 to nine-tenths in 1910.

Changes in the Character of Farm Practice in Illinois

A general notion of the character of the farming practice in Illinois may be derived from the agricultural statistics published by the census.

Comparison with the dates before 1880 is not satisfactory because of the absence of data on crop acreages before the Tenth census. Production statistics of one kind or another, however, go back as far as 1840. The data on land in farms began with 1850 and it will be more useful, therefore, to limit the comparisons in most cases to the dates 1850 and 1910.

The first table shows for 1850, 1880, and 1910 the number of domestic animals and of units of selected productions for each 1000 acres of Illinois farm land.

	Census Date	1910	1880	1850
<u>Domestic Animals</u>				
Head of				
Cattle		75.0	75.3	75.8
Dairy or milch cows		32.3	27.3	24.5
Horses		44.7	32.3	22.2
Mules, asses, and burros		4.6	3.9	0.9
Swine		144.1	163.2	159.1
Sheep		32.6	32.7*	74.3
<u>Productions</u>				
Pounds of				
Butter		1433.0	1694.0	1040.5
Cheese		2.5	3.3	106.2
Maple Sugar		0.2	2.5	20.7
Tobacco		31.7	124.2	69.9
Wool		153.4	192.4	178.6
Bushels of				
Irish potatoes		374.1	327.3	208.9

* Except spring lambs.

Above, p. 52 , and Appendix IV, below p. 233..

The distribution of productions is made here on the basis of both improved and unimproved land. Were only improved farm land considered the figures for 1850 would be multiplied by 2.40, those for 1880 by 1.21, and those for 1910 by 1.16.

Taking the figures as they stand, however, the following conclusions may be drawn for areas of the same size:

While the number of cattle remained the same, the number of dairy cattle increased relatively about 25 per cent. The number of horses doubled, and the number of mules, asses and burros increased fourfold. The number of swine remained about constant, while the number of sheep declined in 1910 to less than half what it was in 1850.

The production of butter on farms increased between 1850 and 1880, and though less in 1910 than in 1880 was 40 per cent greater in 1910 than in 1850. Cheese production on farms, while occupying a considerable place in 1850 had almost disappeared in 1910. The same thing is true of maple sugar. The production of tobacco and of wool was greater in 1880 than in 1850, but the figures for 1910 were smaller than at either of the other dates. The production of Irish potatoes increased nearly once again during the sixty year period.

In the following table the increase in the prominence of the cereals may be compared with the growth in the area of farm land.

The comparative production of the cereals and the
comparative acreage of farm land, 1850 to 1910.

Census date	1910	1900	1890	1880	1870	1860	1850
<u>Farm land</u>							
Total	270.2	272.4	253.3	263.1	215.1	173.7	100.0
Improved	556.6	551.6	509.4	518.1	383.6	259.9	100.0
<u>Bushels of</u>							
All cereals	749.4	774.0	604.5	573.5	268.2	201.9	100.0
Corn	1490.8	1787.3	1364.3	626.4	424.1	150.9	100.0
Oats	401.8	210.3	397.1	542.9	320.0	253.2	100.0
Wheat	1456.1	619.6	1080.5	1109.7	2238.5	953.3	100.0
Barley	36.9	35.3	58.0	96.9	91.5	175.6	100.0
Buckwheat	944.6	1325.1	3152.3	3744.6	2946.9	1141.1	100.0
Rye	483.8	515.1	704.8	412.2	435.2	220.3	100.0

United States census reports: Thirteenth, VI, 446; Twelfth, VI, 62-93. All of the cereals except barley had larger aggregate

productions in Illinois in 1910 than in 1850. The increase in the production of oats and rye during the sixty years was greater than the increase in the area of all farm land, but was less than the increase in the area of improved land. The increase in the production of buckwheat was a little less than twice as great as that of the improved acreage. The corn and wheat productions underwent most phenomenal growth, increasing nearly three times as rapidly as the area of improved land. It is evident that cereals have been occupying an increasingly prominent place in Illinois agriculture.

The relative prominence of the different crops can be measured for the dates between 1840 to 1870 only on the basis of productions. Beginning with 1880, however, the census reports show the number of acres devoted to the various crops. The following table shows the tendencies prevailing in crop acreages

from 1880 to 1910.

Percentage of improved land occupied by
principal crops, Illinois, 1879 to 1909.

Crop Year	All cereals	Corn	Oats	Wheat	Other cereals	Hay and forage
1909	59.0	35.8	14.9	7.8	0.5	10.9
1899	60.5	37.1	16.5	6.6	0.4	11.9
1889	55.3	30.6	15.1	8.7	0.8	13.8
1879	55.4	34.5	7.5	12.3	1.0	9.5

Thirteenth census, V, 554, 556.

The percentage of improved land devoted to hay and forage decreased between 1889 and 1909, and the percentage of improved land devoted to other crops decreased from 11.3 in 1899 to 9.2 in 1909.¹

A marked concentration on the cereals is evident. The percentage of improved land occupied by cereal crops in Illinois in 1879 was exceeded by the percentage in Nebraska, Minnesota, and Iowa; in 1889 by North Dakota and Minnesota; in 1899, by Nebraska and Minnesota; but in 1909 the percentage of improved land devoted to cereals in Illinois exceeded that of any other state.

Though acreage data are lacking for the period preceding the Tenth census the production statistics already cited seem to confirm the impression that the concentration on cereal-farming in Illinois received its impetus about 1880. Up to that time the cereal productions had grown at a slower pace than that with which the improved acreage had expanded. From 1880 on, however, cereals both in acreages and in productions have grown faster than the

1. Thirteenth census, V, 556.

expansion in the area of improved farm land.

The reason offered for the peculiar importance assigned to the period around 1880 is that it was about that time that the end of the free land in the United States began to come into view. The result was an increasing premium and pressure on the food-producing land of the country. The effect is seen in the acceleration given to the rise in farm proper values, and in the concentration on grain production on the lands of great natural fertility.

CHAPTER FOUR

THE CHANGES IN LAND TENURE IN ILLINOIS

The early agricultural economy described in the previous chapter may be regarded as one in which there existed a heavy dependence upon timber. As late as 1850 possibly 45 per cent of the land in farms was "woodland".¹ By 1870 the percentage of farm land classed as woodland had dropped to 20, by 1880 to less than 16, and by 1910, to 10.² Although timber determined the desirability of a district for occupancy by the pioneers, it has come to be regarded as more or less in the way, except that a small amount is desirable for shade, ornament and source of wood for farm purposes.

The days when the farming of the state was based upon woodland must have been characterized by a very small amount of tenant farming. Land was then plentiful not only in other parts

1. In 1850 58.1 per cent of the farm land of Illinois was "unimproved". Certainly as much as three-fourths of this unimproved land was "woodland". The percentage of unimproved land classified as woodland in 1870 was 77.7, in 1880, 89.1 and in 1910, 70.7. The absolute figures were as follows:

Acreages	1870	1880	1910
Woodland	5,061,578	4,935,575	3,147,879
Other unimproved	1,491,331	622,916	1,326,735
Total unimproved	6,552,909	5,558,491	4,474,614

Tenth census, Agriculture, 3, 11; Thirteenth census, V, 77.

2. The original timbered area of the state is said to have comprised about thirty per cent of the total land area, or about ten or eleven million acres. At least $4\frac{1}{2}$ or 5 million acres of timber land were in farms in 1850. In 1910 about 3 million acres of the old timber land were still classed as farm land, and at least $4\frac{1}{2}$ million more of the old timber acreage must have been chiefly in the part called "improved", while the portion of the old timber area in farms probably rose from about half in 1850 to three-fourths in 1910; at the latter date a large proportion of it had been cleared and converted into "improved" land.

of the continent, but even within the state itself. The land was taken up pretty generally by heads of families seeking to establish farm homes.¹ Some renting was carried on in the case of tracts owned by non-residents, but, under the circumstances the rents charged were usually very small.²

Tenure Statistics for the State as a Whole

The census of 1880 showed the number of tenant farms in Illinois to be larger than in any other state of the Union, and considerable capital was made of her "eighty thousand tenants."³ In 1910, Illinois had 104,379 tenant farms, although her rank among the states in this respect had sunk to eighth.⁴ Texas, with 219,575 tenant farms held first rank. At that date Illinois was second in the number of white tenants, having 103,761 against 170,970 in the state of Texas. Illinois stood eleventh in the percentage of all farms operated by tenants. The percentage in Illinois was 41.4, while in Mississippi, where the percentage was

1. See above, Chapter I, page 4 .

2. Buck, Pioneer Letters of Gersham Flagg, 35, 40, 46.

Sheftel, Yetta, The settlement of the Military tract, Chapters I & II (Not yet published).
Gerhard, Fred., Illinois as It Is, 404.

This is not on account of the relative inferiority of the lands first taken up, as a Ricardian might feel after admitting Garey's point that the lands first taken up were inferior in quality of soil. As Walker points out, the lands first taken up, while now known to be chemically and otherwise inferior, were then economically superior. It was only when timber farm economy gave way to prairie farm economy that this economic superiority of the lands earliest occupied was lost.

3. North American Review: 142, 52-67; 153-158; 246-253; 387-401.

4. In the preceding chapter (pages 16, 18, 31) it was seen

highest, it was 66.1. In the percentage of tenancy among white farmers, Illinois with 41.4 ranked sixth, Oklahoma with 55.8 holding first rank. In the farm acreage hired in 1910, Illinois stood third with 51.0 per cent. The percentage in Delaware was 52.8 and in Oklahoma exceeded 60.

The table on the following page summarizes for the state as a whole the available statistics on farm tenure.

It will be observed that the number of farms decreased between 1880 and 1910, while the farm acreage increased. The increase in the average size of farms was from 123.8 in 1880 to 129.1 in 1910.¹ The number of tenant farms increased from 80,244 to 104,379, while the number of farms operated by owners, part owners and managers, decreased from 175,479 to 147,493.² The percentage of all farms operated by tenants rose from 31.38 in 1880 to 41.44 in 1910. The percentage of farm acreage operated by

that Illinois ranked as follows among the states in tenancy, 1880 to 1910.

	1910	1900	1890	1880
Number of Tenant Farms				
Total	8	5	3	1
White	2	2	...	...
Percentage of Farms Operated by Tenants				
All farms	11	13	10	11
Farms of Whites	6	11	...	...
Farm Acreage Leased	3	2	...	...

1. See below, page 104.

2. The number of persons in agriculture in excess of the number of farms, and the number to 10,000 persons in agriculture of the farms of various tenures and of the persons without tenure was as follows: (page 66).

TABLE I. Land tenure in Illinois.

<u>Number of farms^a</u>	1910	1900	1890	1880
Total	251,872	264,151	240,681	255,741
Operated by				
Owners and part owners	145,107	158,503	{	{
Owners proper	107,300	124,128	{	{
Part owners	37,807	34,375	{158,848*	{175,497*
Managers	2,386	1,950	{	{
Tenants	104,379	103,698	81,833*	80,244*
<u>Percentage of farms</u>				
<u>operated by</u>				
Tenants	c 41.44	c 39.26	b 34.00	b 31.38
Owners and part owners	c 57.61	c 60.00	{	{
Owners proper	c 42.60	c 46.99	{	{
Part owners	c 15.01	c 13.01	b{66.00	b{68.62
Managers	c 0.95	c 0.74	{	{
<u>Number of acres in farms</u>				
Total	d 32,522,937	32,794,728	30,498,277	31,673,645
Operated by				
Tenants	e 14,177,411	12,668,748	x	x
Owners & part owners	e 17,787,063	19,671,602	x	x
Owners proper	c 12,208,930	14,758,439	x	x
Part owners	g 5,578,133	f4,913,163	x	x
Hired by part owners	g 2,414,448	f2,165,538	x	x
Owned by part owners	g 2,989,385	f2,747,625	x	x
Hired by tenants and part owners	c 16,591,859	c14,834,286	x	x
Owned by owners proper and part owners	g 15,198,315	g17,506,064	x	x
Operated by managers	e 558,463	e 454,378	x	x
<u>Percentage of farm acres^c</u>				
<u>operated by</u>				
Tenants	43.59	38.63	x	x
Owners and part owners	54.69	59.98	x	x
Owners proper	37.54	45.00	x	x
Part owners	17.15	14.98	x	x
Hired by part owners	7.42	6.60	x	x
Owned by part owners	9.73	8.38	x	x
Hired by tenants and part owners	51.01	45.23	x	x
Owned by owners and part owners	47.27	53.38	x	x
Operated by managers	1.72	1.39	x	x

*Part owners and managers not separately classified, and included in most cases, probably, with owners rather than tenants.

United States census reports:

- a. Thirteenth, VI, p. 413, or Bulletin, Agric.-Ill., p. 5.
- b. Eleventh, Agric., p. 4. c. Private calculation.
- d. Thirteenth, VI, p. 412, or bulletin, Agric.-Ill., p. 4.
- e. Thirteenth, VI, p. 414, or bulletin, Agric.-Ill., p. 6.
- f. Twelfth, V, p. 308. g. From data privately supplied by the Census bureau. The data are lacking for Carroll, Lee and Massac counties; these counties were omitted in calculating the percentage of part owners' land hired, owned and unknown; the acreages for these counties were estimated by the percentages for all other counties. See Appendix V, below, pages 234-239.

tenants proper was 43.59 in 1910, while that hired by part owners was 7.42. The percentage of farm land operated under lease in 1910 was, therefore, as already stated, 51.01.

The following table shows the decennial changes in the statistics on the number and percentage of farms operated by owners and by tenants, during the entire period, 1880 to 1910, and during each of the three intervening decades.

Farms operated by Illinois -

Period	Owners ⁽¹⁾				Tenants			
	Number		Percentage		Number		Percentage	
	Per cent		Per cent		Per cent		Per cent	
	Tend- ency	of change	Tend- ency	of change	Tend- ency	of change	Tend- ency	of change
1880-1910	Dec.	16.0	Dec.	14.7	Inc.	30.1	Inc.	31.8
1900-1910	Dec.	8.5	Dec.	3.6	Inc.	0.6	Inc.	5.3
1890-1900	Dec.	0.2	Dec.	8.0	Inc.	26.7	Inc.	15.6
1880-1890	Dec.	9.5	Dec.	3.8	Inc.	2.0	Inc.	8.3

Farm land operated by Illinois -

Deedholders ⁽²⁾				Lessees ⁽³⁾				
1900-1910	Dec.	13.2	Dec.	11.5	Inc.	12.7	Inc.	12.8

- (1) Includes "owners proper", "part owners", and "managers".
 (2) Includes "owners proper", and "part owners", under deed.
 (3) Includes "tenants proper", and "part owners" under lease.

Cen- sus Year	Number of persons without tenure	Number to 10,000 persons in agriculture of				
		Farms of owners, part			Ten- ants	Persons without tenure
		owners and managers	Part owners	Man- agers		
Total						
1910	192,370	3320	851	54	2350	4334
1900	196,863	3483	746	42	2240	4271
1890	189,453	3693	...	..	1902	4405
1880	180,571	4022	...	..	1839	4139

See above, page 50 ; subtract number of farms from that of all persons employed in agriculture to get the number of "persons without tenure".

that
It appears the operation by owners decreased while operation by tenants increased during each decennial period. Between 1880 and 1890 the change lay in the decline in the number of owners rather than in an increase in the number of tenants. During the decade 1890 to 1900 the reverse was the case. The number of farms operated by owners remained practically the same, while the number operated by tenants underwent a very large increase. During the decade 1900 to 1910, the number of tenant farms remained practically the same while there was a sharp decline in the number of farms operated by owners.

The increase of 31.8 per cent in the relative prominence of tenant operators was effected chiefly during the decade, 1890 to 1900, while the decade 1900 to 1910, showed the smallest increase of any decade since 1880.

When, however, the change in tenancy from 1900 to 1910 is indicated on the acreage basis, it is seen that the increase in the hiring of land was not so small. The number of acres hired increased 1,757,573 or 12.7 per cent over the hired acreage in 1900. There was a decline of 550,176 in the total farm acreage, so that the number of acres operated by their owners decreased 2,307,749, or 13.2 per cent.

The statistics usually employed - those ^{based} on the number of farms - indicate that the percentage of tenancy was 39.3 in 1900, and 41.4 in 1910, a relative increase of 5.3 per cent. The statistics on the acreage basis make the percentage of tenancy in 1900 45.2 and in 1910, 51.0. Putting the statistics on the acreage basis increases the percentage of tenancy for 1900 by over

one-fourth, that of 1910 by nearly one-fourth, and multiplies the rate of increase in tenancy between 1900 and 1910 by 2.4.

The farms of tenants increased 11.2 per cent in size and 0.6 in number,¹ including 38.63 per cent of the farm acreage in 1900 and 43.59 per cent in 1910. The farms of part owners increased from 34,375 in 1900 to 37,807 in 1910, a growth of 10 per cent. The hired acreage in the average partly owned farm in 1900 was 62.99 and in 1910, 63.86, an increase of 14 per cent. The part owners hired 6.6 per cent of the farm land of the state in 1900 and 7.4 per cent in 1910, a relative increase of one-eighth. The fraction of the farm acreage owned by part owners increased from 8.4 to 9.7 between 1900 and 1910, while the percentage owned by owners proper fell from 45.0 to 37.5. Although the farms of owners proper were below the average in size in 1900, having but 118.9 acres on the average, they lost 5.1 acres per farm between 1900 and 1910.¹

The increase in tenancy during the last decade was due in large measure to the growth in the average size of the areas rented by tenants and part owners, accompanied by a falling off in the size of the areas operated by the owners.

An exhibit of maps, some containing shaded areas and others statistical data, is presented in the album to illustrate, with special reference to Illinois, the geographical differences existing in matters of farm tenure.²

1. See below, page 104.

2. See below, pages 171-222.

Maps Based on Number of Farms

The map showing by dots the number of farms operated by tenants, 1910, appears on page 166 . From this map it appears that the density of tenants farms in Illinois is greater than in any other area of equal size which does not include territory north of Tennessee or east of the line bisecting the states from North Dakota to Texas. Within the boundaries of Illinois the tenant farms seem to be pretty uniformly distributed, except for the territory between the Kaskaskia and Wabash rivers.¹ A tendency towards clusters is found around East St. Louis and Chicago, while the density of tenants seems to be somewhat greater in the area between those two cities.

The map on page 167 shows the percentage of farms operated by tenants in every county in the United States. The difference between this map and the first one is due to variations in the average size of farms from section to section. The states whose appearance is most different in the two maps are, perhaps, Oklahoma, Iowa, and Illinois. In each of these states differences in the percentage of tenant farms from one section to another are very striking.

In Illinois sectional differences in the percentage of tenant farms are shown by data in the five maps on pages 179 to 183

In 1880 the percentage of Illinois farms operated by tenants was 31.38. Only one county, Logan, had a percentage greater than 50. In Edwards county the percentage was 14.5. Of the remaining 100 counties, 50 had percentages between 25.0

1. See map on page 168.

and 35.0. These were located largely in the Northern and Western parts of the state. The 28 counties having percentages above 35.0 were clustered in the Central part of the state and in the old "American bottom" district.¹ The percentages below 25 were confined to the Southern part of the state.

In 1890 the percentage of tenant farms in the state was 34.00. Ford county took the lead with a percentage of 53.7. Edwards county had the lowest percentage, 16.0. There were 45 counties having more than 35.0 per cent of their farms operated by tenants, against 28 counties in 1880. The counties with the highest percentages were in the East Central part of the state. Southern counties showed little change from the small percentages they had ten years before.

In 1900 the percentage of farms operated by tenants was 39.26. There were 68 counties having more than 35.0 per cent of tenant farms. of which 26 had percentages exceeding 45. These were located in the East Central part of the state. Tenancy in the strip between the Illinois and Mississippi rivers, known as the "Military tract", probably underwent a more phenomenal increase than that in other sections during this decade of remarkable growth in tenancy.

In 1910 the percentage of farms under tenant cultivation was 41.44. There were 41 counties with percentages exceeding 45.0. Twelve of the counties had percentages exceeding 55.0. In the map for 1910 percentages of tenancy exceeding 45.0 appeared in the counties between the Illinois and Mississippi rivers.

1. Around East St. Louis.

Low percentages characterized the counties bordering the Mississippi river as far south as the old American bottoms, and followed the Illinois river over half the distance to its source. In Southern Illinois, however, the percentages in the counties bordering the Mississippi, Ohio and Wabash rivers were somewhat larger than the percentages prevailing in the interior counties. The lowest percentage was that of Edwards county, 20.1, while the highest was that of Ford, 66.7. Ford, Logan, and Grundy counties were the only counties in the United States north of the latitude of Cairo whose percentage of tenant farms was above 60.0.

The map on page 183 shows the relative growth of tenant farming in Illinois from 1880 to 1910. In five counties, led by DeKalb with a percentage of 122.7, the increase in the relative number of tenant farms was over 100 per cent. In Southern Illinois there were five counties in which there was a decline in the relative number of tenant farms by as much as 225 per cent in the case of Pope county. Through the Central part of the state the increase was between 25 and 50 per cent. In a general way, it may be said that the relative number of tenant farms was stationary in Southern Illinois, increased by one-fourth to one-half in Central Illinois, and doubled in Northern Illinois during the generation, 1880 to 1910.

The following table shows the number of counties in each grade when classified according to the percentage of tenant farms.

	1910	1900	1890	1880	Change, 1880-1910.	
65.0 - 69.9	1	..	..	..	Increase	1
60.0 - 64.9	2	1	..	..	"	2
55.0 - 59.9	9	3	..	..	"	9
50.0 - 54.9	7	9	2	1	"	6
45.0 - 49.9	22	13	8	3	"	19
40.0 - 44.9	17	25	13	5	"	12
35.0 - 39.9	16	17	22	19	Decrease	3
30.0 - 34.9	11	23	20	22	"	11
25.0 - 29.9	11	12	20	28	"	19
20.0 - 24.9	6	9	11	19	"	13
15.0 - 19.9	..	..	6	4	"	4
10.0 - 14.9	..	..	..	1	"	1

The table shows the positiveness with which the percentage of tenant farms has increased in Illinois counties. The counties having percentages below 40.0 have been growing fewer and fewer in number, while the number of counties in each grade above 40.0 have undergone a regular increase.

The lowest percentages at the four census dates, 1880 to 1910, were 14.5, 16.0, 21.2 and 20.1 respectively.¹ The highest percentages were 50.4, 53.7, 62.9 and 66.9 respectively.² So while the lowest percentage was 5.6 points higher in 1910 than in 1880, the highest percentage rose 16.5 points.

All indications go to show, therefore, that while the rate of progress in the direction of tenant farming has been slow in the case of some counties, it has been very rapid in the case of some other counties. The movement away from uniformity in Illinois has been much greater, therefore, than is indicated by the census map first referred to, that showing the distribution of tenants by number.

1. Edwards county, in each case.

2. Logan county in 1880, and Ford county in 1890, 1900 and 1910.

Maps Based on Acreage

The absence of county data on the acreage operated under lease and under deed by part owners in 1900 makes it inadvisable to try to present maps showing the percentage of farm land operated under the various forms of tenure at that date. By courtesy of the Census bureau, however, the Thirteenth census data on renting and owning by part owners have been received by private communication for 99 of the 102 counties in the state. This has made it possible to present data in the maps on pages 184 to 192.

Taking up first the map showing the percentage of farm land operated by tenants in 1910, and comparing it with the map showing the percentage of farms operated by tenants, we find that in Southern Illinois the tenants operated farms smaller on the average than those operated under other forms of tenure. In Central Illinois east of the Illinois river, and especially in the interior counties of Northern Illinois the tenant farms were larger than those of other tenures. In the Military tract tenant farms were about the same in size as other farms. As a whole, the state had 43.59 per cent of its farm land operated by tenants, who constituted 41.44 per cent of the farm operators.

The farms operated by managers were 0.96 per cent of all farms in 1910, but averaged 234.04 acres.¹ The percentage of land managed was 1.72. In Piatt county, managers cultivated 7.64 percent of the land, while in Wabash county they controlled but 0.18 per cent. Little can be seen in the way of sectional variation, since the distribution of managed land can scarcely

1. See below, page 104.

be characterized as other than sporadic. However prevalent managing may be west of the Mississippi,¹ its prominence in Illinois in 1910 cannot be regarded as great.

The percentage of farm land operated by part owners in 1910 was 17.15. The farms of part owners contained an average of 147.53 acres against the general average of 129.1 acres.² In two counties they cultivated over 35 per cent of the farm land, Edwards county leading with 39.1. In DuPage county, in the Northern part of the state, only 3.0 per cent of the farm land was operated by part owners. In a general way it may be said that the control of part owners over Illinois farming is greatest in Southern Illinois, average in Central Illinois, and least in Northern Illinois.

The percentage of the "partly owned" land that was hired in 1910 varied from 30.2 in the case of Hardin county to 55.2 in Vermilion county. The counties in which over 50.0 per cent of the land partly owned was hired were in the East Central part of the state. Those in which less than 40.0 per cent of the land partly owned was rented were in the Southern part of the state. The average for the state was 44.7 per cent.

The map on page 188 shows percentages of farm land in 99 counties leased by part owners in 1910. The smallest percentages were those of DuPage and Kane, 1.6, the largest was that of Edwards, 14.8. The counties in which over 9.0 per cent of the farm land was hired by part owners were confined almost entirely

1. See above, pages 12-13.

2. See below, page 104.

to the Southeastern quarter of the state. Very low percentages occurred in the extreme Southern and Northern ends of the state. The average for the state was 7.43 per cent.

The next map shows the total percentage of land in the 99 counties hired by tenants and by part owners in 1910. The county with the smallest percentage of farm land operated under lease was Hardin, the percentage being 21.6. In Jo Daviess county, in the Northwest corner of the State, and in Pope and Johnson counties, in the Southern tip of the state, the percentages were under 30.0. Massac county would probably come in the same class, had we the data for it. In Ford county 75.4 per cent of the land was leased, and Logan county came second with 72.4 per cent of the farm land hired. Nineteen counties had over 60.0 per cent of their farm land hired, lying with the exception of Whiteside, in a cluster in the Central and East Central part of the state.

The land owned by part owners constituted 9.73 per cent of the total. In DuPage county it was but 1.4, while in Jasper county it made up 21.8 per cent of the farm land of the county. All Southern Illinois, except the extreme Southern tip and St. Clair county, was above the state average. In a rough way it may be said that ownership by part owners decreases the farther north one goes in the state.

Operation by owners proper accounted for 37.54 per cent of the land in 1910. The percentage in Ford county was the least, 18.4, while that in Hardin county was the greatest, 73.2. In 13 counties the owners proper operated less than 25.0 per cent of the

farm land, these being East Central Illinois counties.

The map on page 192 shows the total percentage of farm acres operated by the holders of the deeds to the land. In 13 counties the percentage of land operated by the owners was less than 33.3 per cent; in 5 of them the percentage was under 20; and in one, Ford, the percentage was 23.7. Only three or four counties had percentages exceeding 70.0, Hardin, 77.8, Pope, 75.9, Johnson, 74.0, and possibly Massac. The average for the state was 47.28 per cent.

The data shows that land leasing has a very prominent place in Illinois agriculture, but that there are important sectional variations.

The Sectional Aspects of Land Tenure in Illinois

The sectional differences in land leasing in Illinois can be best understood by tracing the sectional variations in other features of agriculture in the state.

Maps on pages 172 to 209 show the sectional differences in the following respects:

- (1) The percentage of land area in farms, 1880 and 1910.
- (2) The percentage of farm land improved, 1880 and 1910.
- (3) The percentage of improved farm acreage devoted to the production of all cereals, and of corn, 1880, 1890, 1900 and 1910.
- (4) The average number of acres per farm, 1880, 1890, 1900, and 1910.
- (5) The average value of products per acre, 1879, 1889, and

1899.¹

(3) The average value of land and buildings per acre, 1880, 1890, 1900, and 1910.

In 1880 it appears from the maps that the counties with the highest percentage of land area in farms, of farm land improved, of improved land in cereals, of improved land in corn, and the counties with the highest average number of acres per farm, and the highest average value of products per acre were located in the Central and Northern parts of the states. The Southern Illinois counties were characterized by smaller figures in every one of the aspects noted. The highest priced lands were located in the Northwestern parts of the state, and those lowest in price were in Southern Illinois.

The maps for 1890 and 1900, for the most part, show the same sectional differences, though with a tendency for the

1. The unreliability of these statistics and the fact that they represent the gross values of products makes it necessary to be cautious in their use.

Data were gathered in 1880 and 1890 for products raised, the part fed to livestock on the farm being given an estimated value and included. In 1900 the data excluded the products fed to livestock. This makes comparisons with previous census data of doubtful value. Even for the same census comparisons between counties in which livestock and dairying were practised and other counties must lose most of their significance. The census of 1910 gives up any attempt "to compute or even to estimate approximately the total value of farm products" and proceeds to enumerate the "numerous difficulties which stand in the way of obtaining a total which would be at once comprehensive, free from duplication and confined exclusively to the products of a definite period of time."

The values are the so-called "farm values", rather than the values of the products delivered at the market. The data at each census are for the preceding year, so far as productions are concerned, but the acres of land in farms and the prices are those of the current census year.

See Thirteenth census bulletin, Agriculture, Illinois, page 1.

sectional differences to widen, except in the case of the percentages of county land areas in farm and of farm areas improved.

In 1910 the percentages of land area in farms and of farm land improved were much more nearly uniform throughout the state than at previous census dates. This is because of the fact that there has been an increasing demand for land in all parts of the state. That fact is attested by the increased value of land in 1910 compared with the previous dates. There was a concentration on the production of cereals in the Central counties. This was doubtless in response to the higher prices prevailing in cereal products. The result of the changes in prices and of distribution of productions was to increase the differences between sections in the values of products per acre.¹ The sectional differences in the values of land and buildings per acre were greater than in any of the other features, due in large part to the fact that the relative increase in the value of land and buildings per acre was greatest in the districts where highest prices had prevailed in 1900 and 1890. The same kind of a development took place in the matter of average farm acreages. In the Southern part of the state farms changed little in size from 1880 to 1910, whereas in the counties of the Central part of the state a considerable increase took place.

The development during the last generation can be better understood, perhaps, by making reference to the map showing the

1. The above statement is based upon an inspection of data on the different items of farm production for 1909.

distribution of timber in 1830. On this map is indicated what may be called the ten cords line, which divides the territory of the state in which more than ten cords of wood existed on the average acre from that in which the cordage per acre was less than ten. The latter may be regarded roughly as the original prairie district of the state.¹

In nearly every series of maps, the later dates show a concentration of development within the old prairie district. The most striking case is that of land values. The highest values in 1880 were in the territory north and west of the Illinois river. By 1910 the district of highest land prices had become centered in the East Central part of the state and the counties in which the value of land and buildings per acre exceeded 125 dollars were, almost without exception, those whose areas constituted the original prairie.

When the maps illustrating tenancy are compared with those showing the sectional aspects in the other features of agriculture, the resemblance is striking. The counties with highest percentages of tenancy at each date were, for the most part, the prairie counties. In 1910, especially, the district in which over 45 per cent of the farms were operated by tenants, that in which over 50 per cent of the land was leased, was defined almost exactly by the line dividing the original prairie and timber regions.

The sectional association of tenancy with the values of

1. Pooley, E. V., The Settlement of Illinois from 1830 to 1850, page 308. For the map, see below, page 170.

products, the values of land and buildings, and the average size of farms is exhibited in the table on the next page. The counties were divided into six groups of seventeen counties each, independently for each census. Group I included the seventeen counties that stood highest in the percentages of tenant farms at the census date in question. Group II including those ranking from eighteenth to thirty-fourth, and so on for the other four groups.

In all cases the range of difference between the highest and lowest county group averages was greater at each succeeding census date. This increase in sectional differences seems to have affected not only the items given here, but also items of production, - nearly everything, in fact, except the percentage of land area in farms, the percentage of farm area improved, and the percentage of farm area in woodland. The application of capital and labor seems to have produced greater sectional differentiation.

The tendencies toward sectional concentration in the various lines have doubtless come from the fact that farming has been carried on for increasingly larger market areas, and that the capacities of soil and situation for the production of certain staples have been revealed more and more clearly.

In the case of each of the three comparisons given in the table the sectional association with tenancy was closer at each succeeding census. In 1910 the parallelism was very close between tenancy and average values per acre both in the case of products and of land and buildings. The county groups III and IV

Table showing the values of products per acre, the values of land and buildings per acre, and the average number of acres per farm for Illinois counties arranged into groups according to the percentage of farms operated by tenants in the individual counties; and the rank of the county groups for each item.

Item	Tenancy county groups						
	I	II	III	IV	V	VI	
Average value per acre Products preced- ing the census.							
1910	(a)	(a)	(a)	(a)	(a)	(a)	
1900	\$10.20	\$9.74	\$7.92	\$7.84	\$5.99	\$4.68	
1890	7.23	6.79	6.59	5.82	4.63	3.97	
1880	7.06	7.02	6.89	6.08	4.96	5.94	
Land and buildings							
1910	143.20	118.10	103.30	80.80	51.40	39.10	
1900	63.30	61.40	44.10	44.70	38.80	19.30	
1890	47.80	52.10	43.24	40.90	28.43	23.17	
1880	31.10	34.94	38.23	28.45	25.68	29.75	
Average number of acres per farm							
1910	160.5	146.3	125.0	131.2	110.7	100.5	
1900	148.6	129.5	134.7	123.9	112.0	96.4	
1890	136.5	138.5	135.6	128.0	115.0	104.0	
1880	122.1	132.2	124.0	117.5	123.8	122.3	
<u>Rank of county groups in</u>							
Average value per acre of products of year perceding the census	1910 ⁽¹⁾	(1)	(2)	(3)	(4)	(5)	(6)
1900	1	2	3	4	5	6	
1890	1	2	3	4	5	6	
1880	1	2	3	4	6	5	
Land and buildings							
1910	1	3	3	4	5	6	
1900	1	2	4	3	5	6	
1890	2	1	3	4	5	6	
1880	3	2	1	5	6	4	
Average number of acres per farm							
1910	1	2	4	3	5	6	
1900	1	3	2	4	5	6	
1890	2	1	3	4	5	6	
1880	5	1	2	6	3	4	

(a) Exact data discontinued; partial returns give basis for ranking.

(on the basis of tenancy) ranked fourth and third, respectively, in the average size of farms, but otherwise the sectional correspondence between tenancy and the size of farms was consistent. The same sectional correspondence obtained between tenancy and the percentage of land area in farms and of improved land devoted to cereal and especially corn and oats production.

The fundamental reason for the increasing association of all the factors has been the influence of an increasing market demand for cereals, the production of which in Illinois was being carried on under a perfecting machinery economy. This influence has been most felt in districts in which machinery could be most effectively employed and in which the natural fund of fertility enabled fertilizing costs to be almost entirely eliminated. The rich, level prairie has, therefore, responded with greater percentages of land area under cultivation, of farm area improved, of improved area in cereals, and with greater acreage per farm.

Tenancy has been a phase accompanying this movement, and has been related to the other factors.

The sectional association of tenancy has been more consistent in the case of values of products than in the case of values of land and buildings, or the sizes of farms. It would scarcely be urged that the association of tenancy with high acre values of products proves that tenancy was responsible for the higher productiveness of the land. "Productiveness" is a matter of gross values, however, and not simply one of yields per acre. For that reason tenancy may have increased the gross values of products per acre by causing a larger portion of the land area to

be devoted to the production of products the gross values per acre of which are high. The influence exerted upon tenancy has probably been greater than that exerted by tenancy in this relation. The gross values of products per acre in different sections must be a fair index of the relative rents paid for equal areas in those sections. The higher the rents received by the landowners, the greater is the chance that the owners may feel free from the necessity of personally operating their land.

At this point, however, the size of farms and holdings must be considered. Per-acre rent rates may or may not be indicative of the total rental income of owners, according as the size of holdings of the owners varies directly with the per-acre rent rates. The total income received by the landowner is the factor determining his ability to escape from the operation of his land. While it would be extreme to assume that all land owners are seeking to retire from the operation of their land as soon as sufficient income is assured them, there are doubtless numbers of them with whom such is the case. In those cases larger holdings are probably conducive to tenancy. On the other hand, the prevalence of holdings too small to be operated except in connection with adjacent land may contribute to land renting.¹

It is possible that tenancy has had a reflex influence upon the size of farms. When farms are bought to rent, the purchaser naturally invests his money so as to get the lay-out of land best adapted to tenant operation. When the land is contiguous, tenants can be secured who will operate in larger tracts.

1. See above, pages 29 and 30.

This cuts down the difficulty and expense of negotiation and supervision. The better class of tenants are naturally attracted to the opportunities for operating on a large scale. Where the advantages of large-scale farming have been less pronounced, the smaller possibility of profits from farming have operated against the enlargement of holdings. As a consequence fewer of the smaller farms have been rented.

Renting has thus far been considered largely from the point of view of the owners with land to rent. On the other side of the problem are the persons who want to operate land, in most cases, no doubt, looking forward with hope for land ownership. To these persons the prices they must pay for land are of special importance.

It will be observed in the table above that sectional correspondence between land prices and values of products, while not close in 1880, came later to be more and more so. Whether the average profit per acre or per farm resembled land prices or values of products, more in its sectional variation is impossible to prove. It is probable, however, that the superiority of the open prairie land for farming purposes was not so well established in the minds of people in 1880 as it came later to be, for the highest land prices were at that time in the district north and west of the Illinois river. At the later dates, however, it is safe to say that the price of land is a fairly accurate capitalization of the profits of cultivation.

The sectional correspondence of tenancy with land prices was not very close in 1880, although the county groups

showed average values of land and buildings differing little from one another. As the difference between sections in the prices of land increased, the correspondence between tenancy and land prices grew closer. In 1910 it was close enough to be called complete, more so than that between tenancy and size of farms, and probably as much as that between tenancy and the gross values of products per acre.

High land prices have been characteristic of the districts where the standard size of farms was especially large. As a consequence the investment necessary for the purchase of a farm of representative size in the districts of high prices has been much larger than in the districts of smaller farms and lower prices. Since the percentage of the value which can be covered by mortgage is smaller in the case of the higher priced land,¹ the demand for ready cash is greater than the ratio of the price to cheaper land would lead one to suppose. Ready cash, however, and credit on which to get money, is what the tenant ordinarily lacks.

For the most part, the influence of timber has been expressed in our data in the reduced earning power of the land. It seems probable, however, that it has had an effect upon tenancy in a more direct manner. Timber offers attractions to many people because of the kind of life to which it is conducive. Hunting, fishing, and the more varied activities which characterize life where the function of woodsman and farmer are combined

1. Stewart, C. L.: An Analysis of Rural Banking Conditions in Illinois, pp. 14 and 15.

probably cause the owners of such land to have less desire to retire from their places.

The result of the study of sectional differences shows that a single index, such as the value of land per acre or per farm, cannot be regarded as sufficient for an explanation of sectional differences in tenure. Of all single factors given statistical expression in the census reports gross values of products per farm seem to have had the most complete sectional parallelism with tenancy in Illinois.

There remains to be made an inquiry into the historical changes in all the features thus far submitted to study by cross-sections of the state.

Historical Tendencies and Tenure in Illinois

From 1880 to 1910 the number per 1000 farms of farms operated by tenants increased 30.1 per cent, and of farms operated by owners, part owners and managers decreased 16.0 per cent.¹

The number of acres of improved land per 1000 acres of land area increased from 728 to 782, or 7.3 per cent, between 1880 and 1910. That the improved farm acreage should have changed less than the tenure of the operators is only to be expected. In so far as slowness of expansion in the improved farm acreage in Illinois is indicative of a similar condition throughout the county,² it may imply a greater cost of increasing the improved acreage beyond the dimensions attained in 1880. To the extent that such is the case, the relative scarcity of land

1. See above, page 86.

2. See above, pages 40 and 41.

compared with the general population may, through the rise in prices of products and of land, and through increasing competition for rented farms, have stimulated the practice of tenancy at the expense of operation by owners.

Improving land has probably affected its tenure. In 1880 there were 4,935,575 acres of woodland and forest in Illinois farms; by 1910 this was reduced to 3,147,879 acres.¹ Evidence is thus afforded of a tendency to clear the timber from the land.² Large quantities of land have been reclaimed by means of drainage projects, especially along the river courses. By increasing the value of the land the way was better paved for more successfully renting it in the future. It is probable, however, that the individual farmers who cleared and drained their farms were not

1. See census reports: Thirteenth, VI, 425, and Tenth, Agriculture, 103.

2. The wooded areas are said to represent with fair accuracy the original forest of the state. About thirty per cent of the total area of Illinois in 1857 was given as woodland. By 1880 it appears that all of the woodland in farms added to all the land area not in farms could not have exceeded twenty-five per cent, while it is possible that the percentage of the total land area in timber did not exceed fifteen per cent. The forest area of the state in 1911 was estimated at between five and six per cent of the land area.

It seems that nearly half of the timberland existing in Illinois in 1857 was cleared during the twenty-three years preceding 1880, while two-thirds of the remainder was cleared during the thirty-one years following.

It is not probable that any great portion of the timber has been ruthlessly burned in order to use the space for agriculture. The market for hardwood timber, of the varieties found in both Northern and Southern Illinois, has been an open one, and many of the varieties native to Illinois were such as sold well. The more prevalent practice in deforestation seems to have been to cull the more saleable timber, and to treat the cut-over timber as the owner's policy might dictate.

(See Hall and Ingalls, "Forest Conditions in Illinois, 177, 180-242, passim).

themselves inclined to rent them out to tenants.¹ The fact that their farms respond to their efforts to improve them, though simple in its psychology, is a significant one. The succeeding generation of owners, however, may not be so much attached to the land as their predecessors who improved it, and may find the growing of staple crops by their tenants as profitable to them as if the land had always been treeless or naturally drained.

The following table summarizes for the state as a whole the data available for inter-censal comparison.

Census date	1910	1900	1890	1880
Absolute numbers of tenants per				
1000 operators	4144	3926	3400	3138
Acres per farm	129.1	124.2	126.7	123.8
Average value per acre				
Products of preceding year(a)...	\$17.92	\$9.40	\$7.02	\$6.43
Land and buildings	\$108.32	\$53.84	\$41.41	\$31.87
Percentage of increase over preceding census				
Tenants per 1000 operators	5.3	15.6	8.3	....
Acres per farm	3.9	-2.0(b)	2.3	....
Average value per acre				
Products of preceding year .	89.9	33.9	9.2	....
Land and buildings	101.2	30.0	30.0	....
Percentage of increase, 1880-1900, occurring during each decade				
Tenants per 1000 operators	21.0	53.0	26.0	....
Average value per acre				
Products of preceding year .	72.9	21.7	5.4	....
Land and buildings	71.3	16.3	12.5	....

(a) With 1880 as 100.0 index numbers for the succeeding census date were calculated on the basis of the two American systems, with the following result: 1890, 86.3; 1900, 85.3; 1910, 100.9. The values before being placed on the tabular basis were 1890, \$6.06; 1900, \$8.02; and 1910, \$17.98. (Derived from United States census reports: Thirteenth, VI, 426, 436 and 446; Twelfth, V, 273 and 274; Eleventh, Agriculture, 204-206; and Tenth, Agriculture, 111-112.)

(b) Minus sign (1) indicates decrease.

-----1. Drainage has sometimes been carried on by "outside" capitalists, in whose case the element of personal attachment to land would not ordinarily be strong. See histories of most river counties.

The table shows a movement forward in all the phenomena, much greater in the case of the values of products and of land and buildings than in the case of tenancy or the size of farms. The relative number of tenant farms increased most between 1880 and 1900, the decade during which the farms grew smaller on the average. This affords no contradiction, however, to the conclusion previously arrived at, that smaller farms are usually operated by the owners. A reduction in the size of farms may, moreover, be related to the increase in tenancy, because of a movement on the part of larger owners to cut down the size of the farming units for the sake of greater efficiency in production.

The rise in the value of products per acre is, of course, by no means an accurate measure of the average profits per acre, and, therefore, we should expect to find the value of land and buildings subject to a different variation. The difference, however, is not great, the value of products per acre increasing 171 per cent, and that of land and buildings 241 per cent from 1880 to 1910. It is only fair to estimate that the money profits of farming an acre increased somewhere near 200 per cent.

The increase of tenancy was much slower than the rise in the value of products, the value of land and buildings, or, possibly, of the profits per acre. The decade of the most phenomenal increase in the value of products, land and buildings, and, presumably, profits, was the one of least relative increase in tenancy, and followed the decade of greatest relative increase in tenancy. It might seem, therefore, that increasing tenancy may have influenced the other factors, as well as that the other

factors influenced tenancy.

Considering divisions within the state, the discrepancy between advances in land prices and the increase in tenancy is still wider. The increase in the acre prices in the East Central counties during the thirty year period was from four to six fold, about twice as great as the increase in Northern and Western Illinois and about three or four times as great as in Southern Illinois.¹ The percentage of tenancy doubled in Northern Illinois, increased by half in Central Illinois, and remained practically stationary in Southern Illinois.

It appears, then, that in Illinois land prices have been highest and have increased most where and when the percentage of tenancy was the highest, but that the percentage of tenancy has not increased most either when or where land prices were the highest, or when increasing the most rapidly. In other words, land prices have been more consistent with and responsive to differences and changes in tenancy than tenancy has been to differences and changes in land prices.

The relation between rising incomes in agriculture and land tenure is a complicated one. One consideration is the fact that with rising profits from agriculture many operating owners who might otherwise have left and possibly sold their farms, are attracted by these greater profits to stay.² Thus the immediate effect of conditions causing higher land prices may be to prevent

1. See below, page 210.

2. See Taylor, Introduction to the Study of Agricultural Economics, pages 244-246.

increase in tenancy. On the other hand, the immediate effects of falling profits in farming may be that operating owners become discouraged and leave and possibly sell their land. By leaving without selling tenancy is increased. If the land is sold to tenants who proceed to operate, tenancy is decreased. So it is more difficult to say whether the immediate effects of falling profits and low prices is to change the tenure of the land, although the ultimate effects are surely to decrease tenancy. The immediate accompaniment of rising land prices is likely to be an increase in tenancy, although the ultimate situation is favorable for more tenancy. The dates marking the greatest increase in tenancy are 1890 and 1900. Agricultural profits were disappointing during the early part of the decade, but were picking up later. The suggestion is that many owners whose desire to quit farming was strengthened by the depression, found the effectiveness of their desire improved by the change for the better. Since 1900, however, the net returns per acre upon which the increment is based, have grown. The economic impulse to stay upon the farm has been strengthened, while the economic freedom to leave the farm has also grown.

The influence of the prevalence of tenancy upon land prices arises in several ways. In the first place, the greater the number of available tenants for the renting of a piece of land, the greater is the value of an investment in such land to those who want to hold it without operating it. An investor can afford to bid higher for such land. In the second place, competition among tenants causes the rents paid to approach more

nearly to the maximum. This naturally increases the value of the farm to the owner. In the third place, the higher the percentage of tenancy on land devoted to the production of staple crops, and the more limited the aggregate acreage on which such crops can be profitably produced, the greater must be the "restraint of production" through the inefficiency of tenants, and the greater must be the effect of this restraint of production upon prices of products, profits of farming, and land values. Within its limits, inefficient production of crops, the area of production of which is naturally or economically restricted, must exert an influence similar to a crop shortage, which often results in a greater relative rise in prices per unit than the relative decline in aggregate production.¹ In so far as inefficient farming is promoted by tenants the effect may be somewhat to stimulate land prices through the "shortage" influence on production. As the areas of land suited to the production of staples become more definitely fixed, and as a greater demand is made by population for the products of those areas, the influence of inefficient production must become more influential in this respect.

Still it is probably true that the rise of land prices have exerted a greater influence upon tenancy than tenancy has upon the rise of land prices. Lands increasing in value so as to give a high annual rate of return on previous valuations tend to be capitalized at a more conservative rate of interest on the earning power. The tenant, however, is not in a position to pay

1. Thompson, J. G.: Publications of the American Economic Association, 9, 68-70.

prices based on such a conservative interest rate. The rise in land prices has doubtless exerted an influence of this kind most pronouncedly in the cereal-growing counties. In five counties in Central Illinois the average prices of land and buildings per acre increased over five-fold between 1880 and 1910, as against an increase of about half as great for the state as a whole. Between 1900 and 1910 the relative increase in the value of land and buildings per acre was about twice as great in the East Central counties as in the Southern counties.¹ The greater multiplying power of capital invested in the old prairie district has had much to do in increasing the size of holdings among land owners and of decreasing the chances for tenants to become owners in those districts.

The historical study shows that tenancy has increased along with the (1) percentage of land area improved, (2) the average number of acres per farm, and (3) the average value per acre of products and of farm property. In large measure tenancy has been increased and operation by owners diminished because of the movements in the other factors. Tenancy has probably increased faster because of the declining rate of increase in the farm area. The rate of increase in tenancy has been less than the increase in the value per acre of products and of land, and greater than the increase in the average size of farms.

Considering both sectional and historical aspects of tenancy growth in Illinois it seems to the writer that the principle underlying the extent, distribution and growth of land leasing is

1. See below, page 212.

the real value of the rental income per farm. Although, from the point of view of the landlords, the real income of their entire holdings is the important consideration, the representative holding is one farm.¹ The share the tenant gets doubtless bears a different ratio to the landlord's share in the annual surplus of operations from section to section and from time to time. The tenant's portion is probably subject to less variation in absolute value than the landlord's portion. This means that the tenant's share in the surplus is probably smaller, relatively, when the surplus is large, and smaller, absolutely, when the surplus is small. The possibility of saving by the tenant is probably greater where the kind of farming operations is such as to place a premium upon diversified knowledge, operating capital and managerial ability.² Such a condition prevails more especially in Northern Illinois. In Central Illinois the farming method does not require such diversification of technical knowledge, and the competition for farms to rent is especially severe.³ In Southern Illinois the surplus of operations and the acreage per farm are both small. In Southern Illinois tenancy has undergone very little change; in Central Illinois it has been highest and increasing somewhat; while in Northern Illinois, it has been increasing at a rapid rate.⁴ In Northern Illinois the prosperity

1. See below, page 138.

2. See "An Analysis of Rural Banking Conditions in Illinois," pages 19 and 20.

3. For several years nearly all news items in Chicago papers relating to cases where from 25 to 50 bids were made for farms offered for rent came from towns in Central Illinois.

4. See below, pages 137-139.

of tenants appears to have been responsible for their tendency to multiply in numbers, while in Southern Illinois the opportunity for tenants to rent seems to have been restricted. In the prairie district of the state tenancy has probably been regulated more by the higher rental income per owner, which has not only liberated owners from the necessity of operation, but has caused the land to be capitalized at such a low rate that the tenants are not able profitably to own farms.

To summarize the conclusions of the chapter it appears that the forms of tenure have been phases accompanying, limited by and modifying the conditions and changes in the agricultural economy of the state. The prevalence, sectional character and growth of farming by tenant operators is chiefly governed by the real value of the shares of the owners and tenants in the surplus of operation. Tenancy forms a sort of cumulative index of the effectiveness of the desire of the owners to escape the operation of their land, and of the ineffectiveness of the desire of tenants to become owners.

CHAPTER FIVE

A DESCRIPTION OF FARM OPERATORS IN ILLINOIS

The farm operators of Illinois are, with few exceptions, heads of families residing on the farms. In 1890 the number of farm operators was 240,681, of whom 158,848, or 66.0 per cent, operated as owners.¹ At that date 252,953 farm families were reported, of whom 160,065, or 63.3 per cent, resided on farms owned by them.² In 1900 the number of farm operators was 264,151, of whom 158,503, or 60.0 per cent, were owners, 103,698 tenants, and 2,413 "owners and tenants". The number of farm families was 262,388,³ of whom 158,496, or 60.4 per cent, owned farms and 101,817 hired. The almost exact correspondence in the numbers and tenures in the case of operators and families is sufficient evidence that in 1890 and 1900 the normal Illinois farm was a "family farm". There is no reason for believing that statistics taken later would show any change in this condition.

1. Twelfth Census, V, lxix.

2. The number of families residing on hired farms exceeded the number of farms operated by tenants by 11,055. It is possible that this was due to the reporting of some laborers hiring homes, or of some managers and owners occupying homes on land belonging to a tenant farm.

3. Unknown, 2,075.

The Bases of Renting.

The following table shows the number of tenants of different kinds, 1880 to 1910.

Cen- sus date	Total		Cash and unspecified		Share and share-cash		Percentage	
	Number	Inc.	Number	Inc.	Number	Inc.	Cash, etc.	Share, etc.
1910	104,379	0.7	37,163	-2.6	67,216 ^a	2.6	35.6	64.4
1900	103,698	26.7	38,173	30.8	65,525	24.5	36.8	63.2
1890	81,833	2.0	29,182	41.5	52,651	-11.7	35.7	64.3
1880	80,244	---	20,620	---	59,624	---	25.7	74.3

(-) Minus sign denotes decrease.

(a) 23,665, or 35.5 per cent, were share-cash.
Thirteenth census, V, 124, and VI, 438.

The period, 1880 to 1890, during which the total number of tenants underwent only a slight increase, was the decade of greatest readjustment of terms between the tenants and landlords. The number of share tenants declined 6,973, or 11.7 per cent, while the number of cash tenants increased 8,562, or 41.5 per cent. The percentage of all tenants renting on shares fell from 74.3 in 1880 to 64.3 in 1890. The tendency continued, though much abated, until 1900, when 63.2 per cent of the tenant farms were rented on shares. In 1910 there were 23,665 farms rented on a basis combining the share and cash principles. All of these are here counted as share tenants, though it is probable that a part of the farms rented in 1900 on the combined share and cash basis were then counted as cash

tenant farms. To the extent that share-cash tenants were classified as cash tenants in 1900, less significance is to be attached to the decrease from 36.8 to 35.6 between 1900 and 1910 in the percentage of farms rented for cash.¹

Percentage of tenant farms rented for cash:

the number of counties in each of ten percentage groups.

Group	The state				Divisions							
					Northern				Central			
	10	00	90	80	10	00	90	80	10	00	90	80
90-100	..	2	1	1	..	2	1	1	..	..	..	..
80-90	..	1	1	..	..	1	1	..	..	..	..	..
70-80	4	2	2	1	4	2	2	1	..	..	..	..
60-70	8	6	1	1	8	5	1	1	..	1	..	..
50-60	2	13	16	3	2	9	8	3	..	4	8	..
40-50	15	12	15	9	8	5	8	8	5	6	7	..
30-40	12	17	22	20	1	..	3	5	11	16	16	9
20-30	16	13	11	19	1	..	..	4	12	7	5	8
10-20	24	22	12	37	..	..	..	1	7	2	1	19
0-10	21	14	21	11	..	..	..	..	2	1	..	1

1. Moreover, the districts of the state in which the greatest decline took place from 1900 to 1910 in the percentage of farms rented for cash were the districts in which the percentage of other than cash tenants renting on the share-cash basis was the highest in 1910. Suggestion, at least, is thus given that the apparent decline in the relative prominence of cash tenancy is due to the classification of some tenants as share-cash tenants in 1910 who in 1900 would have been counted as cash tenants. (See below, p. 217.)

In 1880 there were only 6 counties in the state in which the percentage of tenants renting for cash exceeded 50. All of them were in the Northern division of the state. In 1890 there were 21 such counties, 13 in the Northern division and 8 in the Central division. In 1900 the number of counties in which cash renting predominated was 24, 19 being in the Northern and 5 in the Central part. In 1910 the number of such counties fell to 15, all of them being in Northern Illinois. In 1880 there were 48 counties in which the percentage of farms rented for cash was under 20; 27 were in Southern Illinois; 20 in Central and 1 in Northern Illinois. In 1890 the number of such counties was 33, in 1900, 35, and in 1910, 45. At the last date 36 of the counties were in Southern Illinois, and the remainder in Central Illinois.

Cash tenancy was relatively most prominent, therefore, in Northern Illinois, and least prominent in Southern Illinois.¹ Since 1900 cash renting appears to have declined in relative prominence in each division of the state. Share-cash tenancy was most prominent, compared with all tenancy other than cash, in the counties of Central Illinois and the old prairie district.²

The reasons for this sectional difference will appear as the farms and farm practice of the various kinds of operators are described.

1. See below, pp. 213-216.

2. See below, p. 217.

Size of Farms of Various Tenures.

The method used by the census in presenting data on the size of farms of various tenures has undergone a change. For 1880 and 1890 the data are given for owners, cash tenants, and share tenants by acreage-groups. In 1900 the acreage-groups are continued and the farms formerly considered as those of owners are itemized into four classes. In 1910 the acreage-group method is discontinued, except for all farms. In both 1900 and 1910 the total acreages are given, so that averages can be calculated for farms of the several forms of tenure.

The first table shows for the Tenth, Eleventh, and Twelfth census enumerations the percentage of farms belonging to the various size-groups that was operated ^{under} each of the several forms of tenure.

The columns with the bars above them contain data for acreage-groups combined in the column following them.

The farms of owners constituted a smaller percentage of all farms at the later census dates, and the farms of tenants made up a correspondingly increasing percentage. The farms under 50 acres were operated by owners to a larger extent in 1890 than in 1880, and those between 50 and 100 underwent only a slight increase in percentage of tenancy. The farms between 100 and 500 acres in size as well as those 500 to 1000 in acreage were rented to a much larger degree in 1900 and at

Percentage of farms of specified sizes operated under
specified forms of tenure, 1880, 1890 and 1910.

	All farms	Less than 3	3 to 9	Less than 10	10 to 19	20 to 49	50 to 99	100 to 174	175 to 259	260 to 399	400 to 499	500 to 999	1000 and over
		A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.
Own- ers*													
1900 ^a	60.7	66.6	63.8	64.5	58.4	62.5	61.6	58.0	59.1	65.0	59.5	75.3	81.9
1890	66.0	.....	.....	69.2	64.0	67.0	64.3	.....	.....	.....	66.3	81.9	84.6
1880	68.6	60.1	65.3	65.1	54.5	58.8	65.1	.....	.....	.....	74.8	87.7	89.8

All ten- ants													
1900	39.3	33.3	36.1	35.6	41.5	37.5	38.4	42.0	40.0	35.1	40.5	24.6	18.1
1890	34.0	.....	.....	30.8	36.0	33.0	35.7	.....	.....	.....	33.7	18.1	15.4
1880	31.4	39.9	34.7	34.9	45.5	41.2	34.9	.....	.....	.....	24.6	12.3	10.1

Cash ten- ants													
1900	14.5	28.3	22.9	24.0	16.2	10.1	13.2	16.5	15.5	12.8	15.7	7.5	6.4
1890	12.1	.....	.....	18.6	15.4	8.9	12.4	.....	.....	.....	12.7	5.9	7.0
1880	8.1	22.5	16.3	16.5	13.1	8.4	8.4	.....	.....	.....	7.1	4.7	2.9

Share ten- ants													
1900	24.8	5.0	13.3	11.6	25.3	27.4	25.2	25.5	24.5	22.3	24.8	17.1	11.7
1890	21.9	.....	.....	12.2	20.6	24.1	23.3	.....	.....	.....	21.0	12.2	8.4
1880	23.3	17.4	18.4	18.4	32.4	32.9	26.5	.....	.....	.....	17.5	7.6	7.2

*Including farms operated by owners proper, part owners,
"owners and tenants", and managers.
a. For 1900 in detail.

	All farms	Less than 3	3 to 9	Less than 10	10 to 19	20 to 49	50 to 99	100 to 174	175 to 259	260 to 399	400 to 499	500 to 999	1000 A's and over
		A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.	A's.
Own- ers	46.1	63.5	58.9	59.9	49.4	51.2	48.1	42.9	40.3	43.6	42.3	50.8	47.9
Part Own's	13.0	1.8	4.3	3.8	8.4	10.4	12.3	13.3	17.6	18.0	15.1	16.3	16.3
and Ten's	0.9	0.3	0.1	0.2	0.2	0.5	0.8	1.1	1.2	1.5	1.2	2.0	2.5
Mgr's	0.7	1.0	0.5	0.6	0.4	0.4	0.4	0.7	1.0	1.9	0.9	6.2	15.2

United States census reports:

Thirteenth, V, 124; Twelfth, V, 48; Eleventh, Agriculture,
118, 119; Tenth, Agriculture, 26-29.

Percentage of farms of specified tenures belonging
to specified size-groups, 1880, 1890 and 1900.

	Less than 3 a's.	3 to 9 a's.	Less than 10 a's.	10 to 19 a's.	20 to 49 a's.	50 to 99 a's.	100 to 174 a's.	175 to 259 a's.	260 to 499 a's.	100 to 499 a's.	500 to 999 a's.	1000 acres and over
1900												
All ten- ures	0.7	2.7	3.4	4.0	15.6	24.9	30.8	13.5	6.9	51.2	0.8	0.1
Owners**	1.0	3.5	4.6	4.3	17.3	26.0	28.7	11.8	6.5	47.0	0.9	0.1
Tenants	0.6	2.5	3.1	4.2	14.9	24.4	33.0	13.7	6.2	52.9	0.5	*
Cash	1.4	4.3	5.7	4.5	10.9	22.8	35.2	14.4	6.1	55.7	0.4	*
Share	0.1	1.5	1.6	4.1	17.2	25.3	31.7	13.3	6.2	51.2	0.5	0.1
Part owners	0.1	0.9	1.0	2.6	12.4	23.5	31.6	18.2	9.6	59.4	1.0	0.1
"Owners and tenants"	0.2	0.3	0.5	1.1	9.1	22.3	36.2	17.6	11.1	64.9	1.7	0.3
Managers	1.0	1.9	2.9	2.3	8.4	14.6	28.1	17.6	17.4	63.1	6.6	2.2
1890												
All ten- ures	...	...	1.8	2.9	15.9	28.6	....	....	....	49.7	1.0	0.2
Owners	...	...	1.8	2.8	16.1	27.8	....	....	....	49.9	1.2	0.2
Tenants	...	...	1.6	3.1	16.6	30.0	....	....	....	49.3	0.5	0.1
Cash	...	...	2.7	3.7	11.6	29.3	....	....	....	52.1	0.5	0.1
Share	...	...	1.0	2.7	17.5	30.4	....	....	....	47.7	0.6	0.1
1880												
All ten- ures	0.1	1.6	1.7	3.2	18.2	29.7	....	....	....	45.6	1.3	0.3
Owners	*	1.6	1.6	2.6	15.6	28.2	....	....	....	49.7	1.6	0.3
Tenants	0.1	1.8	1.9	4.7	23.9	33.1	....	....	....	35.8	0.5	0.1
Cash	0.1	3.3	3.4	5.3	18.9	31.2	....	....	....	40.4	0.7	0.1
Share	*	1.3	1.3	4.5	25.7	33.8	....	....	....	34.2	0.4	0.1

**Exclusive of part owners, "owners and tenants" and managers in 1900 only.

*Less than 0.05.

United States census reports: Twelfth, V, 8; Eleventh, Agriculture, 118,119; Tenth, Agriculture, 26, 28, 29.

previous dates. The same movement toward tenant operation prevailed in the case of the farms over 1000 acres in size, though at a less rapid rate than in the case of the farms having between 500 and 1000 acres.

The percentage of farms operated by tenants in 1900 was highest in the farms between 100 and 175 acres in size, with those 10 to 20 acres next, and those 100 to 499 acres third. Ownership was most prevalent in the farms exceeding 500 acres, followed by those under 3 acres.

It is evident that the farms of medium size were most cultivated by tenants, while the farms extraordinarily large and small were most characterized by operation by owners. It is a favorable comment on the ability of tenants to carry on large scale farming that such a large portion of the farms over 500 acres are tenant farms, and that renting of the large farms was increasing relatively faster than renting of either medium or small farms. On the other hand, evidence is afforded that the owners of large farms, though still commonly operating their farms in 1900 were giving up personal operation relatively faster than owners of smaller farms. It is natural to suppose that the large farms are most inaccessible to tenants with the objective of ownership, and that, except as division through inheritance takes place, their owners should be well able to prevent their disintegration.

The percentage of all farms operated by cash tenants nearly doubled between 1880 and 1900, while that of share tenants

remained the same. Among the farms having under 100 acres the percentage of farms operated by share tenants was decreasing and the percentage operated by cash tenants was increasing between 1880 and 1900, and in the case of the farms between 100 and 500 acres and those over 1000 acres, cash tenancy was increasing more rapidly than share tenancy. The trend in tenancy among the farms between 500 and 1000 acres was toward the share basis. As pointed out previously,¹ exclusively cash tenancy was not so prevalent in 1910 as was so-called "cash" tenancy in 1900. The lack of acreage-group data in 1910 makes it impossible to pursue the movement with anything like accuracy after 1900.

The following table shows the average acreage in the farms of various tenures in Illinois in 1900 and in 1910.

Tenure designation	Census date		Increase in acreage 1900-1910	Percentage of increase
	1910	1900		
All operators	129.1	124.2	4.9	4.0
Tenants	135.8	122.2	13.6	11.2
Cash	.....	124.2	....	....
Share	.....	121.0	....	....
Managers	234.0	233.0	1.1	0.5
Owners and				
part owners	122.6	124.1	-1.5	-1.2
Owners proper	133.8	118.9	-5.1	-4.3
Part owners	147.5	142.9	4.6	3.2
Owned	83.7	79.9	3.7	4.7
Leased	63.9	63.0	0.9	1.4
Owners and				
tenants	.....	159.1	....	....

Twelfth census, V, 8, and table, above, p. 65.

1. See above, pp. 97-98.

In 1900 the average size of all farms was 124.2 acres. Cash tenant farms and those of owners, including part owners, were almost exactly the same in average acreage as those of all tenures. Share tenants and owners proper operated smaller farms on the average. The largest were those of managers, which averaged nearly twice as large as the farms operated by owners proper. Part owners owned 80 acres and hired 63 on the average. Owners and tenants co-operating, operated farms of 159 acres.

In 1910 data are lacking for cash and share tenants and for owners and tenants co-operating. The average acreage for all farms increased 4.0, and an increase in average acreage took place in both the owned and leased portions of the farms of part owners, in the farms of managers, and tenants. In the case of managed farms the increase was slight while in the case of tenants it was most pronounced, being 13.6 acres. The farms of owners proper lost 5 acres, on the average.

Ownership has been declining and tenancy increasing in the districts of larger farms. There seems to be no evidence of a state-wide tendency for the farms of various tenures to change.

Description of Farm Properties.

The data on farm equipment are not complete, but such as are available are presented in the next few pages.

The percentage of farm land improved in all Illinois farms and in those of the major tenure groups in 1900 and 1910, was as follows:

	1910	1900
All tenures	86.2	84.5
Owners	84.5	82.6
Managers	76.7	74.4
Tenants	88.8	87.8

Thirteenth census, V, 130.

It is evident that the tenants operated farms consisting most largely of improved land, and that the farms of managers had the smallest percentage of improved land.

The next table given shows the distribution of the various items among the farms of various tenures.

Land and buildings constituted 88.3 per cent of the value of all farm property in 1900 and 90.2 per cent in 1910. All items of farm property underwent a rise in value between 1900 and 1910. In the case of buildings this was probably due in some measure to better improvement of the farms, but to a greater degree perhaps to the rise in the value of building materials, and to a general tendency to value buildings higher because a higher value was being placed on other items of farm property. Implements and machinery and livestock also had higher value, per farm and per acre in 1910 than in 1900. In the case of implements and machinery the rise in value is probably due to the utilization of more expensive types. The value of live stock has risen not so much because of increase in the number of animals as in the value per head.

It will be observed that the farm properties of managers

Average value of all farm property and of the several classes, classified according to the major tenure groups, Illinois, 1910 and 1900.¹

107.

	All tenures		Owners		Managers		Tenants	
	1910	1900	1910	1900	1910	1900	1910	1900
All farm property								
Per farm	\$15,503	\$7,222	\$13,337	\$7,203	\$10,223	\$17,005	\$17,719	\$7,779
Per acre	130.04	31.12	111.51	58.03	139.28	72.99	120.45	65.43
Land and buildings								
Per farm	13,086	3,634	13,170	3,133	27,343	14,353	12,003	7,133
Per acre	108.32	53.84	99.29	50.42	116.41	63.65	119.33	58.78
Land								
Per farm	13,369	5,733	10,333	5,730	23,632	13,004	14,353	6,377
Per acre	95.01	46.17	84.55	42.06	101.18	55.82	107.91	52.20
Buildings								
Per farm	1,716	952	1,306	1,038	3,563	1,829	1,550	804
Per acre	13.30	7.67	14.73	8.36	15.22	7.35	11.41	6.58
Implements and machinery								
Per farm	293	170	285	170	533	246	298	177
Per acre	2.27	1.37	2.32	1.38	2.28	1.06	2.20	1.37
Livestock								
Per farm	1226	734	1,213	773	2,488	1,928	1,214	650
Per acre	9.49	5.91	9.90	6.23	10.63	9.27	8.94	5.32

Thirteenth census, V, 130, 134; VI, 413.

Twelfth census, V, 149, 252.

1. The data for the minor tenure groups in 1900 was as follows: (Twelfth census, V, 149).

	Owners proper	Part owners	Owners and Tenants	Cash Tenants	Share Tenants
All farm property					
Per farm	\$6,865	\$8,001	\$7,794	9,634	7,048
Per acre	58.57	55.98	48.98	77.56	58.24
Land					
Per farm	4,974	6,069	5,577	7,703	5,605
Per acre	41.83	42.46	35.05	62.01	46.33
Buildings					
Per farm	1,065	836	1,114	973	707
Per acre	8.96	6.55	7.00	7.83	5.84
Implements and machinery					
Per farm	166	187	189	193	153
Per acre	1.40	1.31	1.19	1.55	1.26
Livestock					
Per farm	760	809	914	765	583
Per acre	6.39	5.66	5.74	6.16	4.82

averaged highest in value at both census dates, and the value per acre of the farm property of managers was greater than that of owners and tenants in 1900. In 1910, however, the highest average value per acre of farm property was attached to the farms operated by tenants. In the value of buildings, managed farms had the highest average per farm in 1900 and per acre as well as per farm in 1910. The value of buildings on rented farms was lower than on other farms both per acre and per farm in 1900 and 1910. The value of implements and machinery per acre was greatest on the farms of owners at both dates and in 1910 least on those of tenants. Live stock had the largest average value per acre and per farm on the farms of managers, and the least on the farms of tenants.

In 1900 the statistics show a considerable difference between the values of property in the case of cash and share tenants. The value of all farm property per acre in 1900 was greater in the case of cash tenants than in the case of farmers of any other tenure. In value of buildings per acre cash tenant farms were somewhat above the average, while the average value of buildings per acre in the case of share tenant farms was less than in the case of farms of any other form of tenure, being 40 per cent less than on cash rented farms. The value of implements and machinery per acre was greater in the case of cash tenant farms than in that of farms of any other tenure. The value of live stock per acre was above the average on the farms of cash tenants and least in the case of the share tenant farms.

The tendencies of operators of various tenures to own animals is shown in the following tables.

Percentage of farms reporting various kinds of animals.

Kind of animals	Total		Owners		Managers		Tenants	
	1910	1900	1910	1900	1910	1900	1910	1900
Domestic animals	97.8	97.2	97.8	97.5	96.3	94.5	97.7	96.9
Poultry	94.2	93.5	95.3	94.9	86.5	84.3	92.7	91.6
Bees	11.8	13.2	14.9	16.4	6.9	8.1	7.7	8.5
All cattle	91.7	89.6	93.2	92.3	89.0	87.5	89.6	85.6
Dairy cows	90.6	87.3	92.1	90.2	86.6	82.4	88.6	83.0
Horses	93.5	93.4	93.2	93.0	91.1	91.0	93.8	93.9
Mules	21.7	18.8	21.4	18.6	26.3	23.4	22.0	19.1
Sheep	10.4	9.6	12.6	12.4	11.7	11.9	7.3	5.3
Swine	75.8	83.4	76.3	85.4	69.7	76.7	75.3	80.6

Thirteenth census, V, 130, 142, 146.

From this table it appears that over 90 per cent of the farms in 1910 were reported to have domestic animals, poultry, cattle, dairy cows, and horses. Domestic animals, poultry, bees, dairy cows, horses, and swine were reported for a smaller percentage of managed farms and a larger percentage of owner farms than of tenant farms. Mules were reported by a larger percentage of managers than of operators of other tenures. Only in the case of horses and mules did the percentage of owners reporting

them fail to exceed the corresponding percentage in the case of other operators.

The next table shows the percentage of value of domestic animals, poultry and bees on farms of specified tenures for 1900 and 1910.

Percentage of farms, farm area, and of the value of specified elements of farm property reported in each major tenure group, Illinois, 1910 and 1900.

	Owners		Managers		Tenants	
	1910	1900	1910	1900	1910	1900
Number of farms	57.6	60.0	0.9	0.7	41.4	39.3
All land in farms	54.7	60.0	1.7	1.4	43.6	38.6
Improved land	53.6	58.6	1.5	1.2	44.9	40.1
Value of						
Domestic animals	56.8	63.2	2.0	2.0	41.2	34.8
Poultry	60.9	63.0	0.9	0.8	38.2	36.2
Bees	76.6	77.1	0.7	0.5	22.7	22.5

Thirteenth census, V, 142, 150, and VI, 414.

It appears that in all the items on which comparative value statistics are given the tenants had less than their share. This was less true of domestic animals, which were distributed more nearly as suited the number of farms and acres of farm land operated by the different classes of operators. Between 1900 and 1910 the value of domestic animals on the farms of tenants increased at a much more rapid rate than on the farms of

owners. The values of poultry and bees were found in a disproportionately large degree on the farms of owners.

The data on domestic animals can be more accurately displayed for 1910 in the following table.

The percentage of value of domestic animals reported in each major tenure group, Illinois, 1910.

	Owners	Managers	Tenants
All cattle	60.5	2.4	37.1
Dairy cows	57.0	1.5	41.6
All horses	54.3	1.5	44.2
Mature horses	54.1	1.5	44.3
All mules	54.5	2.8	42.6
Mature mules	53.0	3.0	44.0
Asses and burros	79.1	1.8	19.1
All sheep	71.5	2.3	26.2
Mature sheep	71.4	2.4	26.2
Goats and kids	65.9	1.1	23.4
All swine	60.1	2.4	37.5
Mature swine	60.2	2.5	37.3

Thirteenth census, V, 150, 153.

In this table it appears that the value of other than dairy cattle were found largely on the farms of owners, while the values of dairy cows were distributed among the operators of different tenures more nearly according to the distribution

of farms and acreages. The values of horses were distributed in almost exactly the same proportions as the improved acreage. Mules were evidently employed to an extraordinarily large extent by managers. Asses and burros, sheep and swine were owned by the operating owners to a disproportionately high degree. In swine, however, the tenants had values approaching their share.

The next table shows the average value per head of domestic animals owned by the different classes of operators in 1910.

The average value per head of mature animals on farms of various tenures, Illinois, 1910.

	Total	Owners	Managers	Tenants
Dairy cows	40.90	38.65	47.70	40.00
Horses	120.50	119.00	140.40	123.20
Mules	135.00	131.30	148.20	139.90
Sheep	6.06	5.97	5.91	6.28
Swine	12.48	12.21	14.44	12.85

Thirteenth census, V, 153.

It appears that in the case of all animals but sheep the managers possessed the most valuable stock. Operating owners owned the most valuable sheep, but in the case of all other animals the value of their stock was even less than that of tenants.

The Twelfth census presents data on the value of products of 1899 and the average expenditures for labor and

fertilizers, classified by tenure. The table summarizes the results of the inquiry of that date.

Average value per farm and per acre of products and expenditures for labor and fertilizers, Illinois, ~~Twelfth census~~.

Products, 1899	All ten- ures	Owners	Part own- ers	Owners and ten- ants	Mana- gers	Cash ten- ants	Share ten- ants
Total, Per farm	\$1,309,	\$1,248	\$1,429	\$1,401	\$2,528	\$1,521	\$1,195
Per acre	10.54	10.50	10.00	8.81	10.85	12.24	9.88
Not fed to live stock,							
Per farm	999	933	1,081	1,021	1,877	1,188	940
Per acre	8.04	7.90	7.57	6.42	8.06	9.57	7.77
Average Expenditures, 1899.							
Labor, Per farm	84	77	96	79	339	105	71
Per acre	0.68	0.65	0.67	0.50	1.46	0.85	0.59
Fertilizers							
Per farm	3	3	4	5	8	4	2
Per acre	0.02	0.03	0.03	0.03	0.03	0.03	0.02

Twelfth census, V, 149. See also, *ibid.* 232.

In values of products per farm the managed farms held highest rank, and the farms of share tenants were least. On the basis of values per acre, however, cash tenants held first rank, and co-operating owners and tenants made the least showing. Managers fed to live stock a larger value of products per farm and per acre than other operators. Share tenants fed the least

on either basis of comparison.

Co-operating owners and tenants by furnishing their own labor were enabled to cut down the labor expenditures to 50 cents per acre, the least of any of the operators. Managers expended the most per acre, \$1.46. The expenditure for fertilizers was so small as to make comparisons of little value. It seems, however, that share tenant farms had least expended for them in this way in 1899.

Statistics are presented in the next table to show the tendencies among operators of different tenures in raising products for the market.

Classification by tenure of farms whose products of 1899 not fed to livestock fell within specified ranges of value.

	All val- ues	\$0	\$1 and under \$50	\$50 and under \$100	\$100 and under	\$250 and under	\$500 and under	\$1000 and under	\$2500 and over
All tenures	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Owners	46.1	39.7	41.5	45.1	50.1	51.8	47.6	41.0	39.9
Part owners	13.0	3.6	5.2	7.5	10.7	13.9	13.4	13.3	16.5
Owners and tenants	0.9	0.1	0.1	0.4	0.7	1.0	1.2	0.9	0.9
Managers	0.7	3.7	0.7	0.7	0.5	0.5	0.6	0.8	1.6
Cash tenants	14.5	17.9	14.3	12.8	9.6	8.5	14.0	20.4	17.0
Share tenants	24.8	34.9	38.2	33.5	28.5	24.4	23.3	23.6	23.6

Twelfth census, V, p. 35.

It is apparent that owners operated less than their proportion of the farms whose values of products not fed were under \$100, and over \$1,000. Part owners, and owners and tenants,

co-operating, operated less than their share of the farms with values of unfed products under \$250, and more than their share of the farms in the other value-groups. The managed farms were heavily concentrated in the groups having no unfed products and in all value-groups under \$1000. Cash tenants showed a somewhat similar tendency. Share tenants, however, operated more than their proportion of the farms with unfed products valued at more than \$1000, as well as of the farms with values of unfed products less than \$250.

Several factors must be considered in interpreting these figures. The smaller farms are operated with a different distribution among the tenures than others, and the size of the farms must have some relation to values of all products raised. The figures above, however, are not based on values of all products raised, but only of those products not fed to livestock on the farms raising them. Farms raising products which are fed to live stock are certainly not, for that reason, less productive of value. Finally, the efficiency of the kinds of operators would be roughly expressed in differences in values, but it would be useless to attempt to make deductions on the matter of relative efficiency from the data presented.

The total number of farms in Illinois at the Twelfth census was 264,151. The census classified these farms according to the principal source of income as shown by the productions of 1899. Their distribution was as follows: hay and grain, 107,020;

vegetables, 6,656; fruit, 2,411; live stock, 113,674; dairy produce, 15,602; tobacco, 138; sugar, 60; flowers and plants, 499; nursery products, 126; and miscellaneous, 17,965. The data are introduced here to throw light on the relation of tenure to farm practice. Changes in both factors have occurred since the Twelfth census, and it is regrettable that the Thirteenth census did not prepare a similar report for 1910. The following table shows the percentage of farms of each principal source of income operated under each form of tenure.

Classification by tenure of farms with specified principal sources of income, Twelfth census, Illinois.

	All ten- ures	Own- ers	Part own- ers	Own- ers and ten- ants	Man- agers	Cash ten- ants	Share ten- ants
All farms	100.0	46.1	13.0	0.9	0.7	14.5	24.8
Hay and grain	100.0	33.3	12.3	0.7	0.7	18.1	34.9
Vegetables	100.0	38.4	10.9	0.5	0.6	35.9	13.7
Fruits	100.0	67.3	10.1	0.7	1.7	8.4	11.7
Livestock	100.0	56.7	14.5	1.2	0.8	9.1	17.8
Dairy produce	100.0	50.3	7.9	0.5	0.9	24.5	15.9
Tobacco	100.0	39.9	22.5	...	0.7	12.3	24.6
Sugar	100.0	40.0	16.7	...	1.7	13.3	28.3
Flowers and plants	100.0	74.7	5.8	0.8	3.8	14.6	0.2
Nursery pro- ducts	100.0	84.9	7.9	...	2.4	4.0	0.8
Miscellaneous	100.0	50.2	13.6	1.2	0.6	10.7	23.8

Twelfth census, V, p. 35.

Hay and grain farming are carried on with greatest emphasis by the tenants, particularly the share tenants, while owners operated much less than their proportionate number of such farms. Owners operated less than their share of the farms producing vegetables as their main crop. The tenants operated nearly half of these farms, and over two-thirds of them were rented on the cash basis. Fruit farms were operated chiefly by owners and managers, the tenants being in charge of only about half their proportionate share. Farms specializing in live stock were likewise chiefly owned by their operators. Operators under all forms of tenure except tenancy proper showed a leaning toward live stock farming. Tenants, however, were in charge of only two-thirds their proportionate share of these farms, and the renting inclined toward the share basis. The owners proper, managers and tenants operated dairy farms with somewhat greater emphasis than their relative numbers would indicate. As in the case of vegetable farms cash tenancy was much more prevalent than share tenancy. The tobacco and sugar farms were operated by part owners to a large degree. Farms raising flowers, plants and nursery products were operated mainly by owners and managers. So far as such farms were rented it was almost exclusively on the cash basis. The farms whose principal source of income was miscellaneous, need not necessarily be regarded as farms on which productions were diversified. They are simply those whose principal source of income was such as to require a separate classification from the sources enumerated. Their tenure seems

to have no peculiarities worth discussing.

The part played by owners in the operation of farms specializing in the different crops is much the same in Illinois as in the country as a whole. One exception is that of vegetable farms, 60.4 per cent of which are owned by the operators in the United States, as against a percentage of 38.4 in Illinois. Ownership is much more prevalent among farms reising nursery products in Illinois than in the whole country. The place occupied by part owners is more prominent in the cultivation of tobacco farms in Illinois than in the country as a whole, although in the case of farms raising nursery products the opposite holds true. The prominence of managers in the operation of sugar farms¹ is not reflected in the case of the few sugar farms of Illinois. The tenants of Illinois follow very much the same types of farming as those in the rest of the country, except that farms raising dairy produce are rented to a greater extent on the cash basis in Illinois.

The Twelfth census also supplied data for ten crops showing the number of farms reporting, the number of acres raised and the number of bushels harvested in 1899. These data are presented in the following tables.

1. See above, p. 37.

The percentage of farms of each form of tenure devoted to the production of each of ten selected crops, Illinois, 1910
Twelfth census.

	All ten- ures	Own- ers	Part own- ers	Owners and tenants	Man- agers	Cash ten- ants	Share ten- ants
All farms	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Barley	0.8	0.9	0.6	0.5	1.2	1.2	0.4
Buckwheat	0.5	0.5	0.7	0.8	0.2	0.4	0.4
Corn	93.1	91.1	95.8	97.2	87.2	91.9	96.2
Oats	59.8	55.8	62.5	56.2	60.2	71.0	59.5
Rye	2.7	3.0	2.9	3.1	4.5	2.6	2.1
Wheat	25.7	27.8	33.6	41.8	16.3	10.4	26.2
Potatoes	68.9	70.0	74.4	76.5	60.2	70.7	62.9
Sweet potatoes	7.6	8.6	10.5	15.7	4.5	3.0	6.7
Hay and forage	68.7	73.9	74.2	83.9	73.5	65.2	57.6
Tobacco	0.8	0.8	1.3	2.0	0.4	2.5	0.8

Twelfth census, VI, 96-107; 220-221; 342-345; and 530-531.

This table shows that the raising of corn was practised by almost every farmer in the state. Irish potatoes and hay and forage were cultivated by two farmers in three, and oats by three in five. The owners and tenants, co-operating, the share tenants and the part owners were raisers of corn in a degree above the average. Oats was more widely raised by the cash tenants and part owners; wheat, buckwheat, Irish potatoes, sweet potatoes, hay and forage by owners and tenants, co-operating, and by part owners. Of the tenants those renting on shares contributed widely

to the production of corn, wheat and sweet potatoes.

The number of acres of each crop per farm reporting its production is shown in the following table.

The average number of acres of each crop per farm reporting its production, by tenures, Illinois, Twelfth census.

	All ten- ures	Own- ers	Part own- ers	Owners and Tenants	Mana- gers	Cash ten- ants	Share ten- ants
Barley	10.3	9.3	11.2	8.5	13.3	1.1	12.9
Buckwheat	4.7	4.1	5.0	4.6	2.5	4.7	6.0
Corn	41.7	34.7	45.3	40.3	62.5	51.0	46.5
Oats	28.9	24.9	30.2	23.3	36.0	34.5	31.2
Rye	10.9	10.0	10.6	10.3	20.0	10.8	13.5
Wheat	26.9	24.6	28.8	28.2	36.6	22.9	30.8
Potatoes	0.7	0.7	0.7	0.7	1.2	1.2	0.6
Sweet potatoes	0.4	0.4	0.3	0.3	0.5	0.5	0.4
Hay and forage	18.4	18.6	18.7	21.5	39.1	18.0	17.1
Tobacco	1.1	1.1	1.0	1.6	0.7	1.1	1.0

Twelfth census, VI, 96-107; 220-221; 324-345; and 530-531.

It will be observed that the totals in the columns may exceed the total number of acres in the average farm of the form of tenure under consideration. This, of course, is because of the fact that few, if any, farms raised all of the crops enumerated, and that there was a tendency toward specialization.

The table shows that the corn acreage per corn farm was greater than the corresponding acreage per farm of any other crop. Oats came second and wheat third. Sweet potatoes and Irish potatoes were raised in patches of very small size. The corn acreage was largest on the managed farms reporting corn. If the farms reporting corn were of the same size as the average farm of each form of tenure, the percentage of the managed acreage in corn was less than the corresponding percentage of the acreage in farms of other tenures. It seems probable that the portion of land devoted to corn production was greater in the case of cash and share tenants than of any other operators.

A somewhat clearer light is thrown on this subject by the table below.

Percentage of acres of selected crops produced on farms of various tenures, Illinois, Twelfth census.

	All ten- ures	Own- ers	Part own- ers	Owners and tenants	Mana- gers	Cash ten- ants	Share ten- ants
Barley	100.0	48.8	10.4	0.4	1.5	23.2	15.7
Buckwheat	100.0	41.4	18.3	1.6	0.2	12.0	26.5
Corn	100.0	37.5	14.5	0.9	1.0	17.4	28.5
Oats	100.0	37.0	14.2	0.7	0.9	20.5	26.7
Rye	100.0	45.8	13.5	1.0	2.2	13.3	24.1
Wheat	100.0	45.6	18.2	1.6	0.6	5.0	29.0
Potatoes	100.0	43.7	13.4	0.9	1.0	23.9	17.2
Sweet potatoes	100.0	52.1	12.5	1.7	0.6	8.2	24.9
Hay and forage	100.0	50.0	14.2	1.3	1.7	13.4	19.3
Tobacco	100.0	48.5	20.5	3.5	0.3	4.8	22.5

Twelfth census, VI, 96-107; 220-221; 342-345; and 530-531.

It appears that cultivation by owners was especially prominent in the case of sweet potatoes, hay and forage, but was relatively little associated with the production of oats and corn. Part owners and owners and tenants, co-operating, were devoted to the raising of tobacco, buckwheat and wheat, relatively more than to other crops. Managers were especially given to the raising of rye, hay and forage. Cash tenants emphasized the raising of Irish potatoes and barley, and neglected to a large extent the production of tobacco, wheat and sweet potatoes, while share tenants placed their emphasis on wheat, corn and oats.

The data on yields per acre for each kind of tenure are presented below.

Average yield per acre for selected crops on acreages classified according to tenure, Illinois, Twelfth census.

		Owners							
		All ten- ures	Own- ers	Part own- ers	and ten- ants	Mana- gers	Cash ten- ants	Share ten- ants	
Barley	Bus.	32.1	33.0	31.7	26.8	31.8	31.8	30.3	
Buckwheat	"	10.5	10.0	9.9	10.4	8.0	11.4	10.5	
Corn	"	38.8	38.3	37.6	35.8	41.6	41.3	38.4	
Oats	"	39.5	39.5	38.0	36.5	40.8	40.9	39.2	
Rye	"	14.0	13.8	13.9	12.9	16.3	15.5	13.4	
Wheat	"	10.8	10.6	10.3	9.8	11.9	13.1	11.1	
Potatoes	"	94.9	96.3	95.2	89.1	97.7	95.0	91.1	
Sweet potatoes	"	67.9	66.6	74.3	83.4	102.6	68.2	65.4	
Hay and forage,	Tons	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Tobacco	Lbs.	645.5	660.6	618.8	511.5	643.3	811.4	622.8	

Twelfth census, VI, 96-107; 220-221; 342-345; and 530-531.

Precaution should be taken at the outset against explaining all differences in yields in terms of the relative producing efficiency of the farmers operating under different tenures. In the first place, the farmers of different tenures are not uniformly distributed over the different grades of soil. In the second place, climatic conditions, insects, and the like do not ordinarily affect all grades of soil and all kinds of operators in the same way, least of all during any one year. With this in mind, it is still worth while to study the foregoing table.

Owners obtained highest yields only in the production of barley. Part owners, owners and tenants, co-operating, and share tenants showed no specially large yields in any crops. Cash tenants had the largest yields in buckwheat and tobacco. Cash tenants and managers obtained the highest yields in the production of corn, oats, rye and wheat. Managers stood highest in the yields of hay and forage, and sweet potatoes.

It is an interesting fact that although the share tenants were cultivating their full portion of the fertile land, they exceeded the average yield only in the production of wheat. Cash tenants, on the other hand, failed to have a yield above the average only in the case of barley. The cash tenants are to be found largely in the Northern part of the state where farming practice is more diversified and where live stock plays a more important part in the farming. The suggestion is raised thereby that part of the superiority in yields on the farms of cash tenants was due to larger use of animal matter, and to less

specialization in cereal production. The superiority of the yields on the managed farms may likewise be due in considerable measure to superiority of farming method.

Mortgage Encumbrance on Owned Land.

As indicated in Chapter I¹ the mortgage statistics relate only to land operated by the owners, the part owners in most cases having limited their reports to the land owned by them.

The following table summarizes the data on encumbrance of farm property operated by owners for 1910, 1900 and 1890.

	Owned farms ²		Owned farm homes		Owned farm homes ³	
	1910		1900		1890	
	Number	Per cent ⁴	Number	Per cent	Number	Per cent
Total	145,107	....	158,394	....	160,065	....
Free from mortgage	86,713	60.8	92,702	60.7	101,305	63.3
Mortgaged	55,792	39.2	60,063	39.3	58,760	36.7
Unknown	2,602	....	5,629	....	.....	....

1. Includes all farms owned in whole or in part by the operator.
2. The 1,813 "owned farm homes" for which no reports were secured were distributed between "free from mortgage" and "mortgaged" in 1890.
3. Per cent of combined total of "free from mortgage" and "mortgaged".

Thirteenth census, VI, 414.

1. See above, p. 20.

Between 1890 and 1910 the number of all "owned" farms declined 9 per cent; the number of mortgaged farms decreased 5 per cent; while the number of farms free from mortgage declined 14 per cent. Mortgaging was relatively most prominent in 1900 and appears to have undergone little change since that date. In 1910, 38,662 of the 55,792 farms reported as mortgaged were wholly owned by the operators.¹ The 17,130 farms of part owners thus reported mortgaged constituted 45.5 per cent of all part owners. The percentage of owners proper operating under mortgage was 38.3. The fact that the part owners were under mortgage on their owned land in so many cases is not evidence either that they have been rising from a lower or descending from a higher economic status. Since renting additional land is thus associated with mortgaging, it is evident however, that part owners are operating under and responding to the stimulus of mortgage.

County percentages of owned farms under mortgage in 1910 are presented on the map on page 218 . Three counties had percentages exceeding 50, Schuyler (57.1), Brown (50.7), and Jo Daviess (51.1). Twelve counties had percentages between 45 and 50.² Most of the counties with high percentages of owners operating under mortgage are river counties in which the farm area has been

1. Thirteenth census, V, 414.

2. Whiteside (49.7), Iroquois (47.8), Carroll (47.4), Henderson (47.2), Massac (47.1), Wayne (47.1), Ford (46.8), Champaign (46.2), Pulaski (45.3), McHenry (43.2), Boone (45.1), and White (45.1).

growing. It seems probable, therefore, that mortgages were laid for the acquisition of newly developed land to a considerable extent in those counties. In the East Central counties in which land prices have been increasing most rapidly is another district of considerable mortgaging. The explanation probably lies in the fact that owners have responded to the impulse to enlarge their holdings and have employed mortgages to assist them, and that owners and part owners who have risen from tenancy have been all the more under the necessity of mortgaging in these districts.

Data regarding the amount of mortgage debt were gathered in 1910 and 1890, but not in 1900. Only the farms consisting wholly of owned land were included in 1910, while in 1890 part ownership had not yet been recognized by the census. Of the 38,662 mortgaged farms owned by owners proper in 1910, 1,724 gave no usable reports on debt and value. Taking the statistics at hand, however, the following table is presented.

	Owned farms or farm homes mortgaged		Increase	
	1910 ¹	1890 ²	Amount	Per cent
Number	36,938	78,760	.....	.....
Value - land and buildings	\$454,857,222	\$285,706,170	.....	.....
Amount of mortgage debt	\$115,799,646	\$98,940,935	.....	.....
Per cent of debt to value	\$25.5	\$34.6	.....	.....
Average value per farm	\$12,314	\$4,862	\$7,452	\$153.3
Average debt per farm	\$3,135	\$1,684	1,451	86.2
Average equity per farm	\$9,179	\$3,178	6,001	188.8

1. Includes only farms consisting wholly of owned land and reporting value of farm and amount of debt.
2. Includes all owned farm homes, estimates being made of value of farms and amount of debt for all defective reports.

The average mortgage debt per farm in 1910 was greater in three other states than in Illinois.¹ These were Nevada, \$4,738; Iowa, \$4,048; and Nebraska, \$3,154. The average equity per farm was exceeded in three other states: Nebraska, \$11,322; South Dakota, \$10,782; and Iowa, \$10,526. It will be observed that all of these states are located west of the Mississippi river. In ratio of debt to value in 1890 and in 1910 the percentage in Illinois was exceeded in 26 states. Most states in which the percentage of value covered by mortgage exceeded that in Illinois were located east of the Mississippi. It appears, therefore, that Illinois has shared with the Western states the condition in which land values have increased much more rapidly than mortgage indebtedness, rapid as the increase in indebtedness has been.

The percentage of value of owned farms covered by mortgage in 1910 is given for each county on the map on page 219. For the most part it appears that the counties with the highest percentages were located in Northern Illinois. The lowest percentage was that of Calhoun county, 3.1.² Low percentages characterize the counties in East Central Illinois and in the eastern half of Southern Illinois. In the case of the East Central Illinois counties, the low percentages are probably explained by the rapid rise in land values characteristic of the ten or twelve years preceding 1910. In Southern Illinois, though land values

1. Thirteenth census, V, 167.

2. This is so much less than the percentages in adjacent counties as to lead one to suspect the accuracy of the reports.

have not run away from mortgage indebtedness so rapidly, there has not been the stimulus toward mortgaging such as that afforded by the rate of advance in land prices in other parts of the state. In Northern Illinois the practice of mortgaging the value of the land heavily seems to be most prevalent. That this is due to lack of prosperity seems hardly likely, for the existing evidence, meager though it is, points to a greater prosperity, especially among tenants, in that part of the state.¹ Such being the case, the suggestion arises that probably the chances for land acquisition are stronger in Northern Illinois. Since the farming practice is such as naturally to conserve the soil and since land prices have not been so much affected by increment, the proportion of the acre value for which mortgages can be negotiated is larger.²

On the whole it appears that the "calamity" element has not been a significant cause of mortgaging in Illinois, though no specific investigations of that feature have been made in the last twenty-five years.³ Limiting the data to operating owners has left out of consideration mortgaging of leased land. This is commonly supposed to be a small factor, yet an investigation of the

1. Stewart, C.L., Analysis of Rural Banking Conditions in Illinois, pp. 19 and 20.

2. Ibid, 14 and 15.

3. The only investigations from which any light can be obtained on this question in Illinois were those of the Bureau of Labor Statistics of Illinois covering the dates 1870, 1880, and 1887, (Reported by Secretary John S. Lord in the Fifth Biennial Report of the Bureau, 1888), and that of the United States census of 1890, reported in the volume on Farms and Homes: Proprietorship and Indebtedness.

question under the regime of rising land prices might have been of great importance.

Color and nativity of farmers.

Statistics on race, color and nativity of farmers were gathered in 1890, 1900 and 1910. At the census of 1890 the basis of investigation was the occupier of the farm, in 1890 the occupier of the farm home, and in 1910 the operator of the farm. The following table summarizes the data for Illinois by major nativity groups.

It appears that the percentage of Illinois farmers who were native-born whites increased from 75.2 in 1890 to 86.2 in 1910. The percentage of native-born white farmers owning their farms was at each date less than the corresponding percentage among foreign-born white farmers. The farm managers were foreign-born in relatively few instances. The negro and other non-white farmers declined in number during each decade, and at each date constituted less than 0.7 per cent of all farmers in the state. The percentage of negro and other non-white farmers owning their farms was at each date smaller than the corresponding percentage for either group of white farmers, but increased at a rapid rate during the twenty years. The growth of ownership among non-white farmers in Illinois contrasts with the decline in ownership among the white farmers of the state.

The number of non-white other than negroes was 5 in 1890 and 1900 and 3 in 1910. Separate data for the negroes were not reported in 1910. In 1890 and 1900 the percentage of their farms

The color and nativity of Illinois farmers by
character of tenure for 1910, 1900 and 1890.

Farm operators and occupiers.

Color and nativity	Total			Per cent of total who were				
	Number	Percent- age dis- tribu- tion	Owners	Tenants	Mana- gers	Own- ers	Ten- ants	Mana- gers
Total								
1910	251,872	100.0	145,107	104,379	2,386	57.6	41.4	0.9
1900	262,180	100.0	158,394	101,728	.....	60.4	39.6	...
1890	252,953	100.0	160,065	92,888	.....	63.3	36.7	...
Native white								
1910	217,053	86.2	123,907	91,014	2,132	57.1	41.9	1.0
1900	208,884	79.7	124,498	82,662	.....	59.7	40.3	...
1890	190,234	75.2	117,223	73,011	.....	63.7	36.3	...
Foreign- born white								
1910	33,394	13.3	20,411	12,747	236	61.1	38.2	0.7
1900	51,722	19.7	33,059	18,345	...	64.1	35.9	...
1890	61,044	24.1	42,080	18,964	...	69.2	30.8	...
Negro and other non- white ¹								
1910	1,425	0.6	789	618	18	55.4	43.4	1.3
1900	1,574	0.6	837	721	..	53.2	46.8	...
1890	1,675	0.7	762	913	..	45.7	54.3	...

1. The number of non-whites other than negroes was made up
as follows:

	Indians	Chinese and Japanese
1910	2	1
1900	...	5
1890	3	2

Thirteenth census, VI, 416.

Twelfth census, II, 715, 744.

Eleventh census, Farms and Homes, 567, 591.

Nativity of occupiers of farms and farm homes in Illinois, 1900 and 1890.^a

131.

	Number		Percentage	
	Farm homes	Farms		
	1900	1890	1900	1890
Aggregate	330,303	251,273		
Austria-Hungary	397	271	0.2	0.1
Canada (English)	1,350	1,415	0.5	0.5
Canada (French)	983	384	0.4	0.2
France	...	1,113	...	0.5
Germany	55,933	33,803	21.5	13.0
Great Britain	23,333	17,377	11.3	6.9
Ireland	14,754	9,480	5.7	3.8
Scotland	.....	1,418	...	0.5
Italy	93	48	(1)	(1)
Russia and Poland	336	332	0.2	0.1
Poland	568	...	0.2	...
Russia	58	...	(1)	...
Scandinavia	7,923	5,630	3.0	2.2
Mixed foreign parentage	2,333	.....	1.1	...
Other countries	4,774	1,765	1.8	0.7

(1) Less than 0.05 per cent.

(a) Data for 1910 were collected on the farm schedules, and show results apparently incomparable.

Of the 33,394 foreign-born white farmers in Illinois in 1910, 679 were born in Canada, 17,811 in Germany, 4,607 in Great Britain (2,422 in "England" and 2,185 in Ireland), 6,127 in Scandinavia (878 in Denmark, 982 in Norway, and 4,267 in Sweden), 998 in Holland, 626 in Switzerland, 2,473 in other European countries and 73 in other non-European countries.

U. S. census reports: Thirteenth, VI, 416; Twelfth, II, 744; and Eleventh, Farms and Homes, 591.

and homes owned by them was 43.2 and 53.7, respectively.¹ In 1900 the percentage of negro farms in each tenure group was as follows: owners, 36.5; part owners, 11.5; owners and tenants, 0.8; managers, 0.3; cash tenants, 14.6; and share tenants, 36.3.² The discrepancy between the figures is possibly due to home ownership in some cases unaccompanied by farm ownership. Tenancy, especially share tenancy, was more common among the negro farmers than among the white farmers.³

The percentage of negro owners free from mortgage was 63.7 in 1890 and 59.0 in 1900.

The following table shows the nativity of white farmers in Illinois for 1900 and 1890.

1. United States census reports: Twelfth, II, 714; and Eleventh, Farms and Homes, 567.

2. Twelfth census, V, 50, 52. The corresponding percentages for farms operated by whites in 1900 were: owners, 46.1; part owners, 13.0; owners and tenants, 0.8; managers, 0.7; cash tenants, 14.5; and share tenants, 24.8.

3. The negro farmers in Illinois in 1899 were specializing in vegetable, fruit, tobacco, sugar and miscellaneous lines of farming to a greater extent than were white farmers. The farms of negroes were much smaller than those of white farmers, the percentage of farms under 50 acres in size being 66.5 in the case of colored farmers as against 22.8 in the case of white farmers. (Twelfth census, V, 51, 53.) The negro farmers of Illinois are located chiefly in the Southern counties. The counties in which the percentage of farms operated by colored farmers exceeded 1.0 are as follows: Pulaski, 31.3; Alexander, 13.6; Massac, 8.2; Pope, 3.2; Saline, 3.0; Jackson, 2.2; St. Clair, 1.8; Madison, 1.6; Clinton, 1.5; Lawrence, 1.3; White, 1.2; Sangamon, 1.1; Randolph, 1.0; and Hardin, 1.0. (Twelfth census, V, 73-75).

The number of occupiers of farm homes in Illinois in 1900 is given here as 156,688 while in the preceding table the number of farmers who were native-born whites in 1900 was 208,864. The discrepancy casts discredit upon the statistics. It is evident, nevertheless, that the Germanic was the strongest single element among the farmers in the state, and that those born in the British Isles were next in relative numbers.

The tendencies in ownership among the different population elements in Illinois is shown in the next table.

The percentage of ownership in 1890 was above the average among the Austro-Hungarians, the French, both Canadian and European, the Germans, Irish, Scotch, Italians, and those coming from Russia and Poland. In 1900 the percentage of ownership was above the average among the Austro-Hungarians, the British, particularly the Irish, the Italians and the Polish. Ownership free from encumbrance in 1890 was especially characteristic of the Austro-Hungarians, the French, the Germans, the Scotch, and the Italians, and in 1900 was found especially among the Austro-Hungarians, the Germans, the Italians and those from "other countries". The percentage of ownership was least among the Scandinavians. Those born in Russia and Poland were characterized by ownership in a high degree, but were largely under mortgage.

The Residence of Owners in Relation to the Rented Farms.

The Twelfth census was the only one at which data were gathered on the residence and landed wealth of the owners of

Percentage of Illinois farms and homes owned and rented by
occupiers born in various countries, 1900 and 1890.

	Percentage				Percentage of owners.			
	Owned		Rented		Free		Encumbered	
	Farm homes	Farms	Farm homes	Farms	1900	1890	1900	1890
All occupiers	60.9	63.3	39.1	36.7	60.7	63.3	39.3	36.7
Austria-Hungary	65.9	66.6	34.1	33.3	63.2	66.3	36.8	33.7
Canada (English)	56.4	59.8	43.6	30.2	55.9	56.2	44.1	43.8
Canada (French)	57.7	71.8	42.3	28.3	46.6	52.3	53.4	47.7
France	....	74.7	....	25.3	....	68.8	....	31.2
Germany	59.7	68.2	40.3	32.8	61.8	66.1	38.2	33.9
Great Britain	66.4	60.6	33.6	39.4	55.2	62.6	44.8	38.4
Ireland	68.5	78.8	31.5	21.2	59.2	62.7	40.8	37.3
Scotland	....	79.8	....	20.2	....	69.0	....	31.0
Italy	66.0	79.1	34.0	20.9	61.0	68.8	39.0	31.2
Russia and Poland	81.3	81.3	18.7	18.7	46.6	50.5	53.4	49.5
Poland	84.6	....	15.4	....	44.6	....	55.4	....
Russia	46.6	....	53.4	....	64.2	....	35.8	....
Scandinavia	44.8	52.4	55.2	47.6	44.6	47.9	55.4	52.1
Mixed foreign parentage	56.8	....	43.2	....	56.2	....	43.8	....
United States (or unknown)	61.4	61.4	38.6	38.6	62.3	63.7	37.7	36.3
Other countries	55.4	60.1	44.6	39.9	62.9	65.4	37.1	34.6

U. S. census reports: Twelfth, II, 744; and Eleventh, Farms
and Homes, 591.

rented farms. These data are summarized in the next three tables.

The first table shows the general statistics on residence of owners.

	Rented farms with owners		Owners of rented farms	
	Number	Per cent	Number	Per cent
Total	98,918	100.0	78,068	100.0
Residing in Illinois	93,476	94.5	73,705	94.4
outside of Illinois				
and in				
North Atlantic states	581	0.6	257	0.3
South Atlantic states	677	0.7	507	0.6
North Central states	3,277	3.3	2,836	3.6
South Central states	382	0.4	305	0.4
Western states	497	0.5	431	0.6
Foreign countries	28	(1)	27	(1)

(1) Less than 0.05 per cent.

Twelfth census, V, 309.

It will be observed that the number of rented farms with owners reported is less than the total number of tenant farms.¹ The incompleteness of the data, however, need not be regarded as seriously injuring their usefulness. The number of owners of rented farms was nearly 21,000 fewer than the number of rented farms. A later table brings this fact out more clearly.¹ Nearly nineteen out of twenty farms were held by residents of the state.

1. See below, p.138.

Of the remaining 5.5 per cent of the farms, 3.3 were owned by residents of the North Central states. The owners residing in the North Central states owned the largest number of rented farms each. The 27 owners residing in foreign countries held 28 rented farms.

The next table shows the number, average size and value of the rented farms classified somewhat differently.

Rented farms with owners.

	Number	Average per farm Acreage	Value	Average value per acre	Cash	Number Share	Per cent cash
Total	103,698	122.2	\$7182	\$58.78	38,173	65,525	36.8
Residing in							
County	75,789	118.8	7154	60.19	27,194	48,595	35.9
Other counties of state	17,687	139.5	7561	54.19	6,596	11,091	37.3
Other states	5,254	131.2	7197	54.86	2,330	2,924	44.3
Not reported	4,968	101.5	6239	61.49	2,053	2,015	41.3

Twelfth census, V, 310-311.

About the same number of rented farms have incomplete data as in the previous table. Of the 98,730 rented farms with residence of owners known, 76.8 per cent were held by owners residing in the same county; 17.9 per cent by owners residing in other Illinois counties; and 5.3 per cent by owners residing

in other states. The average acreage and the average value per farm were least in the case of the rented farms of owners residing in the same county, and most in the case of those of owners residing in other counties of the state. The average value per acre, however, was greatest in the case of those residing in the county in which the farms were located and least in the case of those dwelling in other counties of the state. The percentage of tenant farms rented for cash increased with the distance of the owners from their farms, although 65 per cent of the rented farms owned by residents of other states were leased on the share basis.

The Ownership of Rented Farms.

The table on the next page throws light on the concentration of ownership of rented farms as shown by the census of 1900. It is regrettable that similar data are not available for 1910.

The first column shows data based on the number of owners of rented farms. Of these 85.0 per cent owned a single farm each, 95.3 per cent owned fewer than three farms, and 98.8 per cent owned fewer than five farms. Fewer than 200 acres were owned by 74.6 per cent of the owners. One owner of rented farms in a 1000 owned over 2500 acres. The value of the farms was under \$5000 in the case of 48.2 per cent of the owners, and exceeded \$25,000 in the case of 5.3 per cent.

The second third and fourth columns are based, not on owners, but on rented farms possessed by owners of various

Number of farms	Percentage of			
	Owners of rented farms who possess	Rented farms held by owners who possess	Acreage in rented farms of owners who possess	Value of rented farms in farms of owners who possess
One	85.05	67.00	65.88	64.82
Two	10.30	16.23	16.50	16.62
Three and under five	3.49	8.99	9.83	9.83
Five and under ten	0.95	5.03	4.99	5.10
Ten and under twenty	0.17	1.69	1.74	2.68
Twenty and over	0.04	1.06	1.14	0.96
Acres				
Under 100	40.07	33.05	12.96	13.48
100 and under 200	34.57	30.40	28.84	30.60
200 and under 500	21.93	25.84	38.38	38.06
500 and under 1000	2.73	6.58	10.89	10.51
1000 and under 2500	0.60	2.98	5.18	4.87
2500 and over	0.10	1.15	3.73	2.48
Value				
Under \$1000	10.75	8.83	2.18	0.62
\$1000 and under \$2000	10.18	8.63	4.18	1.56
\$2000 and under \$5000	27.28	23.52	16.46	11.60
\$5000 and under \$10000	25.35	19.59	19.04	17.06
\$10000 and under \$25000	21.12	26.58	37.14	41.40
\$25000 and over	5.32	12.85	20.99	27.76

Twelfth census, V, 312-317.

classifications. When the farms are classified on the basis of the number of farms possessed by the owners, it appears that 67.0 per cent were owned by owners holding deeds to one farm each, and 7.8 per cent by owners possessing over five farms each. The farms belonging to owners of one farm each were slightly below the average in size and still more so in value. Those belonging to owners of two and under five farms were somewhat above the average in size and value. Those possessed by owners of ten and under twenty farms were above the average in both size and value, especially in value. One per cent of the rented farms were held by owners of twenty farms and over, and these farms were above the average in size, but below the average in value.

The farms possessed by owners owning under 200 acres were below the average in acreage and value, while the farms of all owners holding more than 200 acres of rented land were above the average in those respects. It is more natural to expect this to be true regarding the acreage than the value. The rented farms belonging to owners of 2500 acres or more were farther below the average in value than those in any other group. Considering value alone, however, there was considerable concentration of ownership in the hands of farms owning 500 or more acres.

The classification of rented farms according to the value of rented farms owned by their owners shows that those owned by owners holding a value of less than \$10,000 were considerably below the average in size and value per acre. Rented farms owned by owners holding such farms having a value exceeding \$10,000

were above the average in both size and value.

On the whole, therefore, it appears that the owners of larger and more valuable areas of land have the operating done on a scale above the average. The concentration of holdings in the hands of the wealthier land owners, while not great, was considerable.¹

Age of Operators.

Statistics were gathered on the ages of operators in 1890, 1900 and 1910. They are presented here both in tabular and graphic form.

The first table presents the percentage of operators whose ages fell within specified age-groups at the dates for which statistics were reported.

It will be seen that the percentage of all farmers who were under 25 years of age was greater in 1910 than at the earlier dates. This was due chiefly to the relative increase in the prominence of younger tenants. Farmers between 25 and 35 years of age declined in relative numerical importance among both owners and tenants from 1890 to 1910. Those between 35 and 55 years old increased in relative numbers among both owners and tenants between 1890 and 1910. Those 55 years old and over declined in

1. Among the largest rented estates in Central Illinois are the following: the Scully estate in Logan and Sangamon counties; the Allerton estate in Piatt county; the Sibley estate in Ford county; and the Funk estates in McLean county.

Age periods	Operators			Owners ^a			Tenants		
	1910	1900	1890	1910	1900	1890	1910	1900	1890
Under 25	4.9	3.5	3.7	1.5	1.4	1.5	9.5	6.8	7.2
25 to 34	22.4	22.7	24.5	12.1	13.5	15.2	36.5	37.0	40.3
35 to 44	26.8	27.8	24.1	25.7	25.6	22.5	28.4	29.8	26.7
45 to 54	23.8	21.5	21.3	29.3	24.7	24.8	16.3	16.5	15.4
55 to 64	14.0	15.0	....	19.0	20.1	....	7.1	7.1	....
55 to 59	....	....	8.8	....	....	11.4	....	....	4.4
65 and over	8.1	10.0	....	12.4	14.7	....	2.2	2.7	....
60 and over	....	....	17.6	....	....	24.3	....	....	6.0
55 and over	22.1	25.0	26.4	31.4	34.8	35.7	9.3	9.6	10.4

(a) Includes part owners.

United States census reports:

Thirteenth, Bulletin, Agriculture: United States, Age of Farmers, 25.

Twelfth: V, 727.

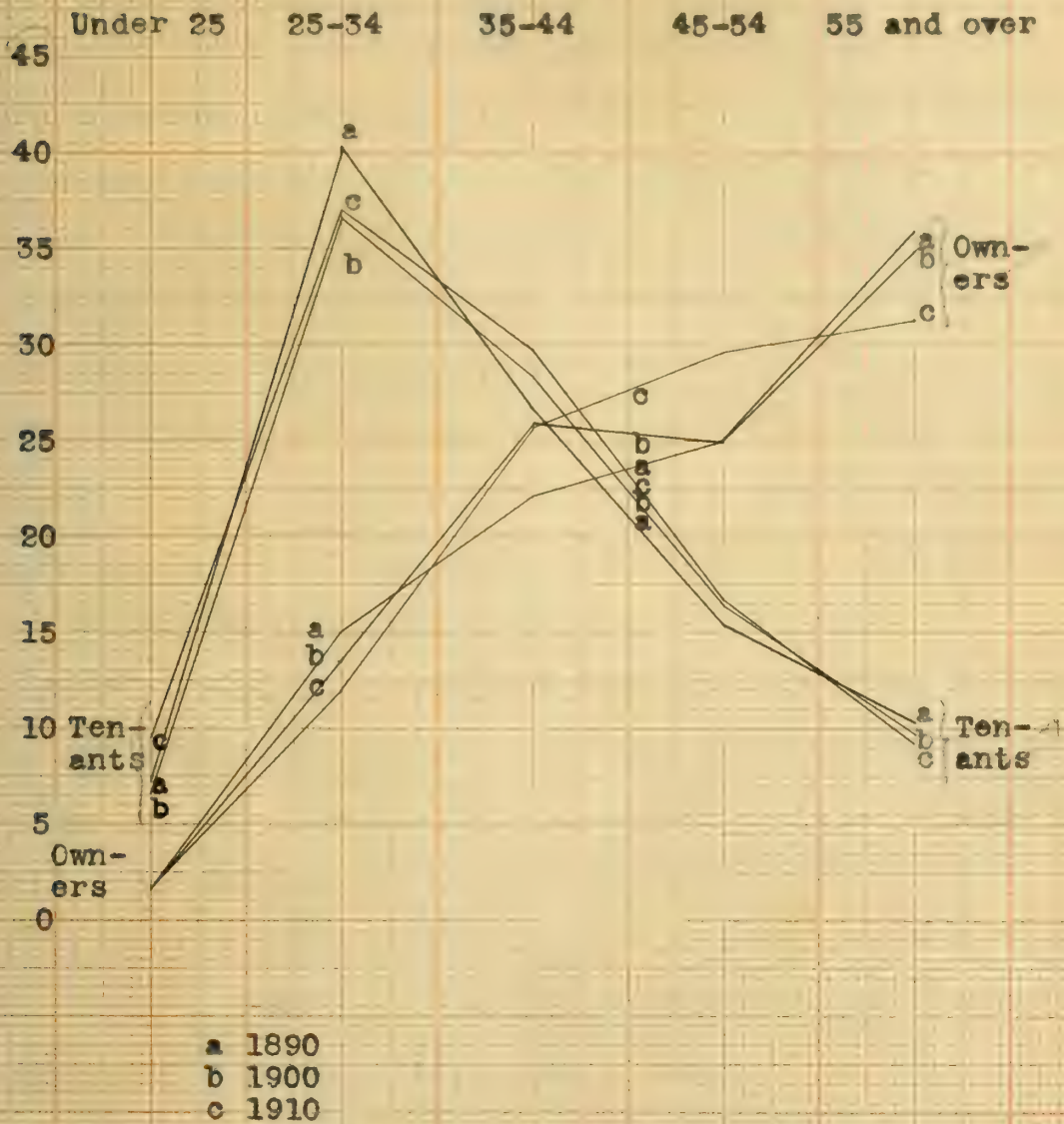
Eleventh: Farms and Homes, 618.

relative prominence among both classes of operators. This decline was especially marked in the case of those over 65 years old as shown by the data for 1900 and 1910.

The graph illustrates the distribution of the owners and of the tenants among the age-periods for 1890, 1900 and 1910.¹

1. Taylor, H. C. The Place of Economics in Agricultural Education and Research, 108-110.

DIAGRAM SHOWING THE DISTRIBUTION OF FARM OPERATORS
AMONG AGE-GROUPS, ILLINOIS, 1890-1910.



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The age period, 35 to 44, is one which included a slightly higher percentage of the tenants than of the owners.¹ The ages under 35 included a greater portion of the tenants than of the owners, while the ages over 44 included a much greater portion of the owners than of tenants. The percentage of owners comprised within the age-groups increased with each succeeding age-period. In the case of tenants the percentage comprised within the age-group, 25 to 34, was greatest, and declined steadily with the succeeding age-periods. It is evident, therefore, that youth is much more characteristic of the tenants than of the owners, and that age seems to increased the chances for ownership.

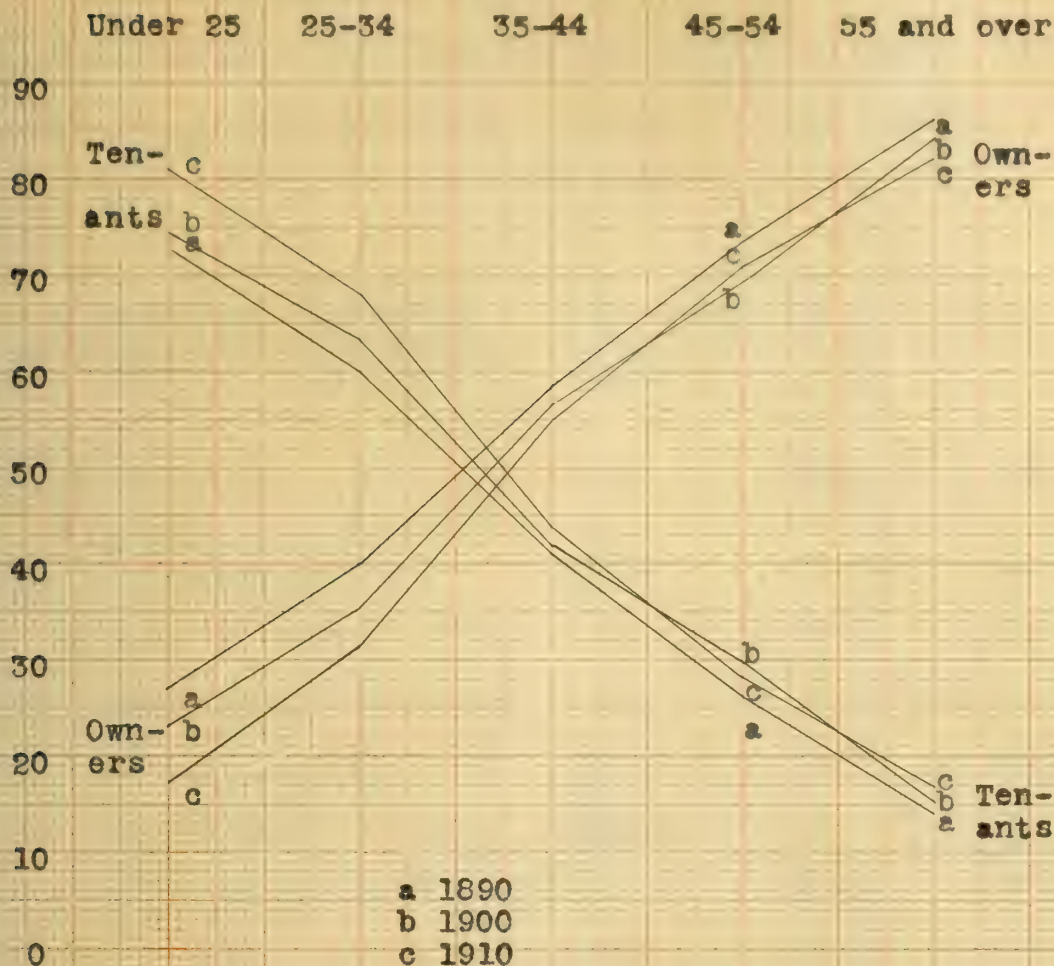
This tendency is perhaps more clearly shown in the second graph. The percentage in each age group who were tenants was higher for tenants than for owners for the first two age-groups, and after that the reverse was the case. It will be observed that the lines for the three dates run more or less parallel to one another, tending somewhat toward convergence for the older age-periods. This shows that there was a tendency for ownership to decline and for tenancy to increase among farmers of all ages.

1. The tendency for tenants of different ages to operate for share or for cash as shown in the following table for 1910, the only date at which such statistics are available.

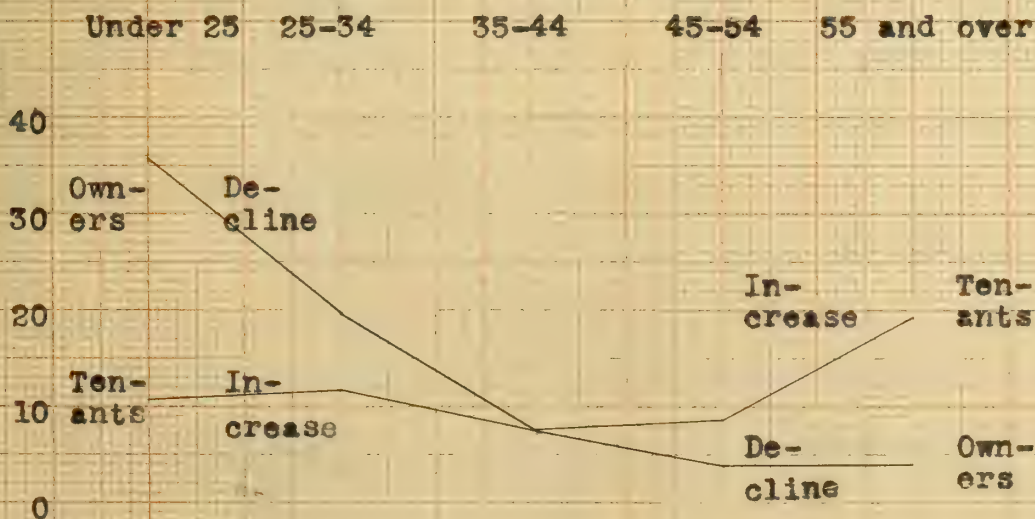
	Cash	Share
Under 25 years	26.2	73.8
25 and under 35 years	34.4	65.6
35 and under 45 years	38.0	62.0
45 and under 55 years	38.2	61.8
55 and under 65 years	37.8	62.2
65 and over	42.8	59.2
Total	35.8	64.2

Such evidence points to an improvement in the economic and technical status of the tenants with advancing age.

DIAGRAM SHOWING THE PERCENTAGES OF FARMERS IN EACH AGE-GROUP OPERATING AS OWNERS AND AS TENANTS, ILLINOIS, 1890-1910.



DIAGRAMS SHOWING THE PERCENTAGES OF CHANGE IN THE PERCENTAGES OF OWNERS AND OF TENANTS IN EACH AGE-GROUP OF FARMERS, 1890 TO 1910.



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The incidence of this change in ownership upon farmers of different ages is more easily seen in the following table, in which the percentages of all farmers who own are expressed as if with the same average at the three dates.

Comparative expression of percentages of farm home owners among the farmers of specified ages, Illinois, 1910, 1900 and 1890.

	1910	1900	1890
Average for all age-groups	57.58	60.40	63.28
Under 25 years	30.2	39.2	42.8
25 and under 35 years	55.2	58.9	62.6
35 and under 35 years	95.5	94.0	93.6
45 and under 55 years	123.0	115.2	114.7
55 years and over	142.6	139.2	135.1
Total	100.0	100.0	100.0

It is apparent that the probability of ownership among the younger farmers was declining, and that the probability that owners would be old men was increasing. In the dynamic changes it seems that the period of tenancy through which many farmers passed was becoming lengthened, especially between 1900 and 1910.

The age of owners free from mortgage encumbrance and of those having mortgages on their places is likewise shown by data for the last three census dates. Although the basis of the data is somewhat different, the difference is so slight as to be

practically negligible in this sort of a comparison.

Table showing the percentage of owners in each age-group owning their places free and encumbered, 1890 to 1910.

Age-period	Percentage of Owners					
	Free			Encumbered		
	1910	1900	1890	1910	1900	1890
Under 25 years	34.2	56.7	63.4	65.8	43.3	36.6
25 and under 35 years	28.0	48.6	51.0	72.0	51.4	49.0
35 and under 45 years	36.3	50.6	56.0	63.7	49.4	43.1
45 and under 55 years	46.4	58.1	61.4	53.6	41.9	38.6
55 years and over	65.1	69.3	72.5	34.9	30.7	27.5
55 and under 65 years	58.6	65.3	....	41.4	34.7	....
65 years and over	74.7	74.5	....	25.3	25.5	....
Total	47.2	58.6	63.2	52.8	41.4	36.8

U. S. census reports:

Thirteenth: Bulletin, Agriculture; United States;
Age of Farmers, 25.

Twelfth, V, 727.

Eleventh, Farms and Homes, 618.

It appears that, in general, freedom from mortgage encumbrance increased with advancing age. Those under 25 years old were exceptions to the general trend, because, doubtless, in many cases they were heirs who had received their land clear of indebtedness. The period, 25 to 35, however, was one during which the percentage of mortgage encumbrance was very heavy. At each census the succeeding age periods showed declining percentages

of owners encumbered, indicating in most cases successful escape from indebtedness.

The decline in freedom from encumbrance was greater between 1900 and 1910 than between 1890 and 1900. The following table enables us to determine how the various age-groups were affected by the changes. The percentage in each age-group is expressed in terms of the percentage of all owners free at the respective dates.

	1910	1900	1890
Average for all age-groups	47.2	58.6	63.2
Under 25 years	72.5	96.8	100.3
25 and under 35 years	59.3	82.9	80.7
35 and under 45 years	76.9	86.4	90.0
45 and under 55 years	98.3	99.1	97.2
55 years and over	137.9	118.3	114.7
55 and under 65 years	124.1	111.4	....
65 years and over	<u>158.3</u>	<u>127.1</u>	<u>....</u>
Total	100.0	100.0	100.0

The owners in the age-groups under 45 years were relatively much less free from mortgage encumbrance at the later census dates, than those in the age-groups over 45 years. The decade 1890 and 1900 was one of relatively little change, while that following 1900 was one of decided decline in the case of all ages under 55 years. It appears, therefore, that the period required

for removing mortgage incumbrance from farms has been lengthened in Illinois.¹

By way of summary the following are the outstanding facts relative to farm operators in Illinois. The farmers operate chiefly as heads of farm families. Share tenancy is more prevalent than cash tenancy, though cash tenancy predominates in the Northern part of the state and is more characteristic of tenants advanced in years and operating farms whose owners reside at a considerable distance. The farms of medium size were most cultivated by tenants, while the largest and smallest farms were most characterized by operation by the owners. There was a tendency toward the cash basis in the case of farms under 500 acres, and toward the share basis in the case of those over 500 acres. During the ten years, 1900 to 1910, the farms of owners proper lost in size, and those of tenants increased pronouncedly, due, probably, to the decline in ownership in the districts of larger farms. The tenants were in charge of more than their proportion of the improved acreage.

The farms of no single form of tenure can be held to be superior in all ways. Managed farms had the highest value in buildings and live stock per acre, and farms of owners were characterized by the highest value of implements and machinery per

1. A certain amount of evidence on this point is afforded by the fact that there is growing discontent among bankers with the practice of renewing mortgages, and an agitation for lengthening the period of mortgages in Illinois. See, Stewart, C. L., An Analysis of Rural Banking Conditions in Illinois, 13, 14, 20, 21.

acre. In values of domestic animals the farms of tenants were below the average, when either the total value or the value per head is considered. The farms of tenants were largely devoted to the production of the money crops. This was particularly true of share tenant farms. Yields were superior in the case of farms operated by managers and by cash tenants.

The practice of mortgaging on the part of operating owners has shown little tendency to increase since 1900, and the equity has been greatly exceeding the indebtedness in rate of increase.

The farms were mostly in the hands of white farmers, with a decreasing portion of foreign-born. This decrease may be due to the ability of the foreign-born to pass the ownership of their land to children born in this country.

The owners of rented farms in 1900 were resident in the state, in about nineteen cases in twenty, and in three cases out of four were resident in the same county in which the farms were located.

Concentration in the ownership of rented farms is seen in the fact that in 1900, 1.16 percent of the owners of rented farms were in possession of 7.78 percent of the rented farms comprising 7.87 per cent of the acreage and 8.74 percent of the value of rented farms.

It was shown by the age statistics that youth was more heavily characterized by tenancy, especially on the share basis, and by encumbered ownership. Advancing years tended to replace

share with cash tenancy, tenancy with ownership, and encumbrance with freedom from mortgage debt. The latest census data, however, indicate that an influence is at work restraining this movement.

CHAPTER SIX.

THE RELATION OF TENURE TO RURAL ECONOMIC AND SOCIAL CONDITIONS
IN ILLINOIS.

The tenure of the land is closely related to a number of prevailing tendencies having a political and social significance.

Decrease in Rural Population.

The existing data make it difficult to get accurately at the decline in rural population in Illinois counties. Data are afforded for the incorporated places in the entire state and for the total population of each county. The "unincorporated" population has been calculated by counties for each of the last census enumerations, and maps showing the county percentages of decline or increase by decades and over the twenty-year period are to be found on pages 220 to 222. In examining these maps it must be borne in mind that unincorporated population is not to be identified with the "farm" population. Some farm operators and laborers live in incorporated places. Some of those dwelling outside of incorporated places follow a line of occupation in cities, some others are engaged in exploiting mineral wealth, such as coal, oil, and gas, and a few conduct country stores. Whether the absolute figures for the unincorporated population approach closely the actual farm population is hard to say. It is probable, however, that the change in the unincorporated population is not greatly different from the change in the actual

farm population. It is possible, to be sure, that the incorporation of places had been more completely accomplished at the later dates, but an inspection of the statistics shows this source of declining unincorporated population to be of slight importance. Moreover, the place held by miners, and others occupied in non-agricultural pursuits in the unincorporated population has probably been an increasing one. All things considered, therefore, the change in the number of people dwelling outside of incorporated places may be regarded as a fair index of the change in the farm population.

The first map shows the change in the unincorporated population occurring during the twenty years, 1890 to 1910. There was a decline in 87 counties and an increase in 15 counties. The decline in the state as a whole was 7.2 per cent.

During the period between 1890 and 1910 the change in the unincorporated population of individual counties was as follows:

	Divisions							
	The state		Northern		Central		Southern	
	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.	Inc.	Dec.
1890-1910	15	87	7	17	1	36	7	34
1900-1910	14	88	7	17	0	37	7	34
1890-1900	35	67	11	13	5	32	19	22

It is apparent that during each of the two decades the unincorporated population was declining in most of the counties. The decrease during the decade, 1900 to 1910, was much more widespread than that taking place during the decade, 1890 to 1900.

In the state as a whole, the decline was 1.6 per cent between 1890 and 1900 and 5.7 per cent between 1900 and 1910. The counties of Central Illinois showed the least tendency to increase during either decade of the period. The proportion of counties in which an increase took place was greatest between 1890 and 1900 in Southern Illinois, and between 1900 and 1910 in Northern Illinois. In 9 of the 14 counties in which an increase took place in the unincorporated population between 1900 and 1910 an increase had occurred during the preceding decade. Of these 9 counties 5 were within a radius of 50 miles of a large city, 3 were marked by the development of mineral resources, and 3 were river counties in which the farm area was being expanded during the period following 1890. Of the 5 other counties in which the unincorporated population increased between 1900 and 1910, 3 were adjacent to large cities.

The increase appears, therefore, to have been due in large measure to exceptional conditions, such as proximity to large urban centers, the inclusion of new farm land, and the exploitation of mineral wealth by people who were enumerated as resident outside of incorporated places. Urban centers exert their influence not only by giving a more intensive tone to the agriculture, but also by filling the surrounding country with residents who belong rather to the city than to farm population.

It is important to observe, first, the relation of the population actually engaged in agriculture to the total unincorporated population. The population actually engaged in

agriculture increased from 430,134 in 1890 to 444,242 in 1910. In 1900 it stood at 461,014. Though the decline in the number engaged in agriculture may have helped to account for the decline in unincorporated population after 1900 it cannot account for the decline between 1890 and 1900.

The number of people dwelling outside of incorporated places in excess of those actually engaged at farming was 1,206,081 in 1890, 1,149,540 in 1900, and 1,074,022 in 1910, a decrease of 132,059 over the twenty years. While the number actually occupied at farming increased 3.3 per cent, the rest of the unincorporated population declined 11.0 per cent. The percentage of the unincorporated population actually engaged in agriculture was 26.4 in 1890, 28.8 in 1900 and 29.4 in 1910. It is suggested, therefore, that a part of the rural decline is due to such causes as reduction in the size of families, removal or disappearance of persons not occupied at any line,¹ and the reduction in the relative number occupied at other than agricultural pursuits while resident in the country.

The number actually engaged in farming would be still larger in Illinois but for the fact that improvements in machinery make possible the cultivation of a large area by each person in agriculture. The acreage of all farm land per individual actually

1. The percentage of the total population occupied in Illinois in 1890 was 35.4; in 1900, 37.4; and in 1910, 40.7. See above, page 50.

engaged in farming in Illinois was 71.2 in 1890, 71.4 in 1900 and 73.5 in 1910; the improved acreage, 60.0 in 1890, 60.3 in 1900, and 63.4 in 1910. There can be no doubt that the land is being farmed with less human labor.

The change in rural population thus appears to be more a symptom and consequence of general economic changes than a causal factor. It is probable, however, that the readjustments in rural population have at least offered occasion, and, in some cases, have been causes affecting the prevalence of particular forms of tenure. The movement of owners to the city has doubtless led to a larger portion of the land owned by them being rented, both before and after the title changes to their heirs. The movement of farm families has doubtless been accompanied by the enlargement of areas of operation, if not by the growth of holdings.

The changes in tenure in themselves have contributed not so much to reduce the number of rural inhabitants as to result in a different kind of rural population.

Co-operation.

The relation of tenure to co-operation is a subject on which we have as yet very little data. The most important forms of farm mutual or co-operative business organizations now existing in the state are the co-operative creameries, grain elevators, mutual insurance and telephone companies, and county agricultural improvement associations. The elevators are found, for the most

part, in the districts where tenants are most numerous. In the case of creameries and county associations, which are located chiefly in the Northern counties, the tenants in the surrounding districts are not so numerous as in the Central part of the state, but their numbers have been increasing with great rapidity. Neither instance, however, establishes a dependence of co-operation on tenancy. The territorial association between the prevalence of tenancy and the number of co-operators is a negative one in the case of mutual insurance companies, and this is probably true also in the case of mutual telephone companies.

The territorial association or dissociation of tenant farming with the existence of co-operative organizations can, however, be little more than suggestive. In nearly all parts of the state there are enough owners within the proper radius to form the nucleus for any kind of co-operative organization thus far developed in the state, if owners were the prime essential. On the other hand, it cannot be said, without claiming too much, that co-operation has brought such prosperity as to have enabled tenants, in any large degree, to become owners of land formerly rented in the vicinity.

That tenants, changing from farm to farm at more or less short intervals should generally be more active and successful than owners in building up co-operative organizations is hardly in the line of reason. It is a somewhat striking fact, however, that one of the most successful advocates of farmers' elevators in the state has been and still is a tenant farmer. The

fact remains, nevertheless, that the shifting of tenants injures their ability to promote co-operative organization, and thereby deprives them of their share of the advantages which might otherwise accrue to them. This is probably less true where the co-operative organizations, such as farmers' elevators, have forced prices in the direction favoring the farmers, for all farmers, regardless of their term of operation in a particular vicinity, get the advantage of the more favorable prices so long as within range of markets dominated by the quotations of the co-operative organizations.

If, in the future, co-operation assumes forms requiring greater permanency of membership in the societies, greater intimacy of acquaintance among the members, or greater investment per member, the tenants will doubtless find themselves handicapped in their relation thereto.

Other features and institutions of rural life must suffer as much or more than co-operative societies. On the whole, the tenants cannot do as much toward stimulating business as the owners might. A part of the negligence of the rural schools can be traced to the absenteeism of landowners. The shifting of tenant families gives rise to problems for the county church, taking members of various sects and denominations into communities where their religious views are not represented in an organized communion, and cutting off the chance for the development of deep friendships and associations which give vitality to church life.

Church and school finances must naturally suffer from the displacement of better-to-do landowners by tenants struggling to get an economic foothold. The relation of tenancy to the education and social life of the rural population and to the vitality of religious organizations deserves much more thorough-going investigation than has yet been given it.¹

Rural Buildings.

The maps on pages 223 and 224 show the average value per acre of buildings in Illinois in 1910 and 1900. It is apparent that the sections where the values were relatively highest were the sections where land was only slightly above the average in value. Where land was highest the value of buildings per acre was near the state average. In Southern Illinois the value of land and of buildings per acre were less than in the rest of the state. In the vicinity of cities the value of buildings seems to be higher, due in part to the greater number of farms in a given area, in part to the greater need of buildings on farms producing for a local market, and in part no doubt to the radiation from the cities of ideals in the architecture of residences. In the districts where tenant farming was most prevalent the values per acre of buildings were small, and from 1900 to 1910 increased at no more than the average rate. This may

1. See (Adams, C.S.) A Rural Survey in Illinois, 1911, and Rankin, F. H., Report on "General Conditions in Rural Communities," "in the report of the Commission on Rural Problems and the Relation of the Young Men's Christian Association to their Solution", 1912.

be traceable in part to the abandonment of buildings on some patches of ground rented to part owners and to a tendency for tenant farms to suffer from lack of concern on the part of the landlord for the buildings with which his tenant has to do.

Concentration on Cereal Raising.

Data are presented on maps on pages 195 to 202 to show the percentage of the improved acreage devoted to the production of (1) six leading cereals and (2) corn alone. It appears that in 1879 the greatest concentration on cereals in any part of the state was in the Southern and Southwestern counties. In 1889 the percentages in Central Illinois were tending in general to surpass those in Southern Illinois. In 1899 and in 1909 these tendencies had gone to still farther limits. In Northern Illinois there was greater concentration on the cereals in 1899 than in 1889 or 1879. In 1909, however, the percentages showed a tendency to diminish.

It seems, therefore, that the movement toward concentration on cereal production has been most persistent and has gone to the greatest extremes in the districts where a large portion of the land is leased; that in the districts where ownership has been most persistent there has been a movement away from specialization in the cereal crops; and that even in Northern Illinois, where the percentage of tenancy has not been much above the state average, there was a decided trend toward cereal production during the period when tenants were multiplying

most rapidly in that part of the state. There can be little doubt that tenancy has contributed toward the concentration in cereals as well as that the regime of cereal farming has been conducive to tenant operation.

The maps showing the county percentages of improved land devoted to the production of corn indicate a strong emphasis on corn production in the original prairie districts of the state. It would be hard to say to what extent tenant farming is responsible for this. The fact that with the increase in tenant farming the emphasis does not seem to have been materially increased leads one to think that the land may be rented fully as much because it is corned as that it is rented. It is possible, however, that with the land leased to such a large extent a tendency away from concentration on corn and other cereals would be resisted by the tenant operators.

Conclusions.

In the agricultural economy of Illinois fundamental physiographic conditions are very important. The importance of their influence on settlement and early conditions of land tenure has been recognized by those who disputed the nature of the influence exerted. That the influence of physiographic conditions has not diminished, but that it has perhaps increased with the advent of machinery and market economy is the conclusion arrived at in this thesis. In the dynamic changes that have taken place, the districts have gained much or little, or lost little or much,

according as they compared favorably or otherwise with other districts at the start. The differences between sections of Illinois have been widening on nearly all bases of comparison.

The importance of renting as a causal factor is emphasized in this investigation. Its significance as a symptom or accompanying phase has been pointed out by nearly every economist who has written upon tenancy. The belief is urged here that renting may affect a restraint in agricultural production, and may afford a sort of pension device to encourage an uneconomic attitude toward their investment on the part of some owners of farm land. In the case of land raising crops the area of possible or profitable production of which is not subject to expansion as rapidly as demand increases, the farming may assume some of the characteristics of monopoly. The concert of action necessary for the realization of monopoly advantage is brought about, not by conscious compact, but unconsciously through ignorance of, inability or indisposition to employ sound methods of agriculture. In so far as the concert of action takes place through the inefficiency of operators of certain tenures, those tenures may be said to promote the realization of the monopolistic element. To the extent that this takes place through tenants it may be said that renting reduces the supply of agricultural produce, raises prices of produce, increases the profits from raising it, and enhances land values. The statement of Adam Smith that "rent enters into the composition of the prices of commodities in a

different way from wages and interest"² may not, under present-day conditions, be quite as unfounded as the critics maintain, for rents determine the amount of renting, and, so far as they are exorbitant, doubtless incite the tenants toward more exhaustive methods.

The changes in the economic conditions of Illinois agriculture appear to have taken place with a sort of periodicity. A decade of great change was followed by one of little change, and that by one of great change in the case of a number of the phenomena of agriculture to which reference has been made in this thesis. It appears, moreover, that to a certain extent the practice of renting has been stimulated by both phases of the periodic movement.

In the advances that have occurred the landless farmers have not shared equally with the landed farmers. The speculative element in land values has been a decided handicap to those without land. Accompanying rising land values, and contributing to them, is the higher commercial rent level. The owners hold the land at a value capitalized at a rate below that at which money may be borrowed for the purchase of land. The greater the discrepancy between the two rates the smaller is the portion of the market value for which a mortgage loan can be negotiated

1. Smith: *Wealth of Nations*, (Buchanan edition) Vol. I, 243. See also, Walker, *Land and Its Rent*, 27, and the debate between Professors Carlton and Haney in the *Quarterly Journal of Economics*. Volumes 24, 25 and 26.

on the purchased land. As a consequence of these conditions the opportunity for tenants to acquire land has been greatly reduced.

Whether reduced loan rates would enlarge the expectancy of ownership for those entering agriculture without land is a question for consideration. To a certain extent the reduction of loan rates would probably reduce the rate at which the value of land would be capitalized, and thus stimulate the transfer of land. The consequence would be a rise in land prices, owing not only to the greater demand for land but also to the expectation of future increment in value. Since, however, the rate at which land is capitalized depends not only on returns in agriculture, but also on rates of return in business in general, it is probable that farm loan rates could be reduced so as to be brought nearer to the rate at which land prices are capitalized. To the extent that this is possible, a reduction in loan rates would probably assist the landless in acquiring land, especially in the districts where land is highest in price.

The prominence of land values in discussions of tenant farming leads logically to a discussion of proposals to control land prices. For the most part the upward movement in the prices of farm lands in Illinois was not a rapid one between 1860 and 1900. Increment could not have played a prominent part in the calculations of land owners. Land was owned chiefly by those who contributed much to the developments which produced the rise in land prices. From about 1900 on, however, a somewhat different condition has been prevailing. During the recent period the rise

in land prices came irrespective of contributions on the part of owners to the agriculture of the country. The districts where land prices have moved forward most have been those in which small expenditures need be made by the owners for fertilizers and improvements. It would seem, therefore, that some method of making the rise in land prices reward the public would have been preferable during the period of phenomenal price increments. A tax of 25 per cent of the increment in the case of land bought in 1900 at \$80 an acre and sold in 1910 at \$200 would have yielded \$30. If one-eighth of such land had been transferred and taxed, the proceeds would have been \$2400 a section, or nearly \$10,000 a school district. The expenditure of half this amount, \$500 a year, within the school district, for roads, schools, and other public purposes would have been a considerable factor in rural improvement. The other half, if devoted to general tax purposes in the county, state and nation would have been of great fiscal usefulness. Not least of all advantages that might have come from such a scheme, however, is that of repressing speculation in land. The tendency for longer association of owners with their land, on which a premium would thus have been placed, would have done something to combat the practice of short leases and of temporary association with the land on the part of tenants.

Whether a tax on the increment is desirable now is another question. It is pretty certain that agitation for such a tax cannot be expected to be strong among land owners so long as the increment is accruing strongly in their sections. For that

reason it seems probable that increment taxation may not be expected at the time when it might be most effective as a check on land speculation.

With land prices at the present stage it seems likely that the increment element must become less important and the rental element more important in the calculations of the land owners. When the annual increment is \$10 on land valued at \$100, based on a clear rental return of \$6 capitalized at 6 per cent, the increment is the source of five-eighths of the addition to the landlord's income and wealth during the year. If, however, the annual increment is the same amount, \$10, on land valued at \$200, based on a net rental return of \$10 capitalized at 5 per cent, the increment is the source of one-half of the addition to the landlor's income. The tendency for the interest rate to fall is responsible for the failure of the increment to decline even more rapidly in importance in the calculations of the land owner. That the interest rate will fall as rapidly on account of the expectancy of future rise in land prices is less likely the higher the stage of land prices. An annual increment of \$10 in the case of \$100 land is 10 per cent on the investment and in the case of \$200 land is 5 per cent. We may expect, therefore, that anticipation of future rise in value will exert a smaller influence both on the rate at which land is capitalized by owners and on the annual income or addition to the wealth of the land owner.

As greater emphasis must fall on the rental as a source of return on the high priced lands, we may probably expect a

pressure by land owners for higher rents. This pressure has already been exerted in some cases. An intensified selective process is thus made operative. The demand for efficiency falls upon farmers of all tenures.

Farming efficiency in the future, however, will probably consist in a greater measure, in the ability to increase net profits through co-operative dealing with the market. The efficiency test must, therefore, rule more strongly against operators of the tenures whose characteristics are opposed to successful co-operative effort on their part.

It is not necessary, however, that the farmers of other tenures operate as efficiently as the owners themselves would operate. If the owners prefer to have their land operated by others than themselves, and if their holdings are sufficiently large, they may content themselves with the financial disadvantage resulting from their refusal to operate their own land.

The coming of the automobile and improved roads and the extension of rural delivery routes and of telephones may remove the main disadvantages of rural residence. The increased opportunity to get better results from employing business methods in agriculture will doubtless attract people of better training and experience into the operation of farm land.

The test of productive efficiency may be somewhat slow in acting, and therefore costly, but it bids fair to penalize unsound farming regardless of the tenure of the operators, and therefore to guarantee the survival of the best forms of tenure and of the best individual operators.

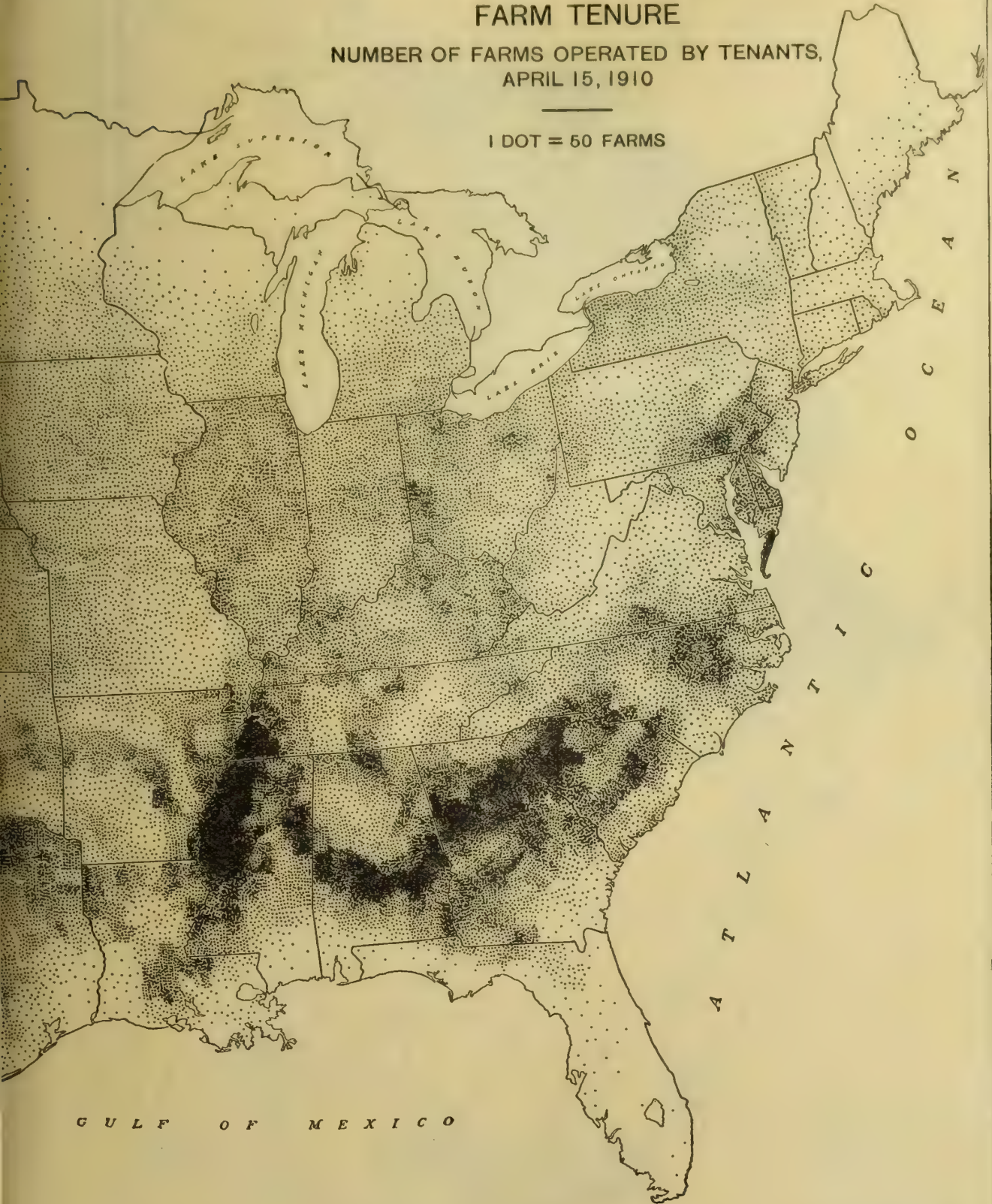
AN EXHIBIT OF
ILLUSTRATIVE MAPS



FARM TENURE

NUMBER OF FARMS OPERATED BY TENANTS, APRIL 15, 1910

1 DOT = 50 FARMS



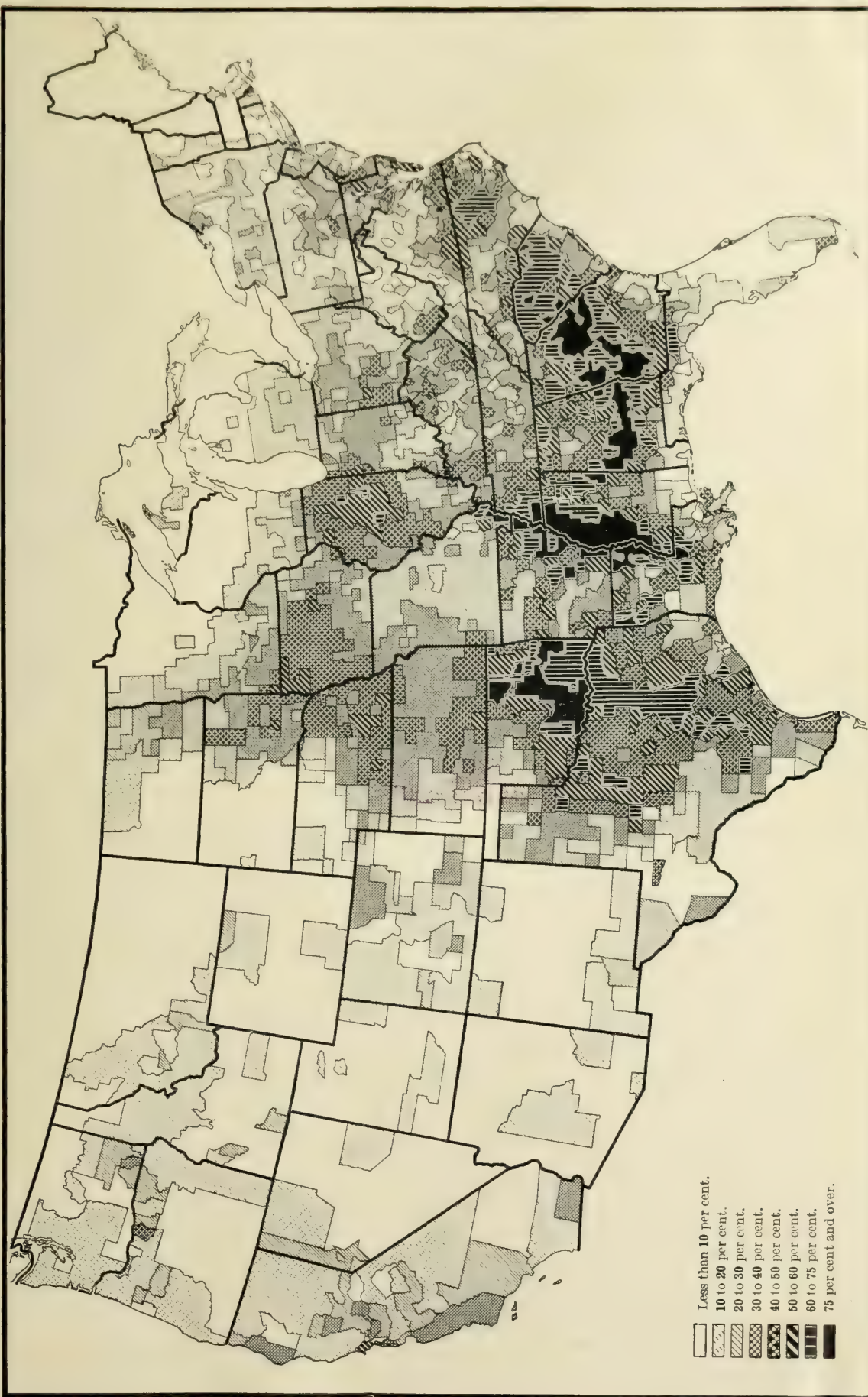
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PERCENTAGE OF FARMS OPERATED BY TENANTS: 1910.

[Per cent for the United States, 37.0.]

Thirteenth Census of the United States: 1910.

Department of Commerce, Bureau of the Census.



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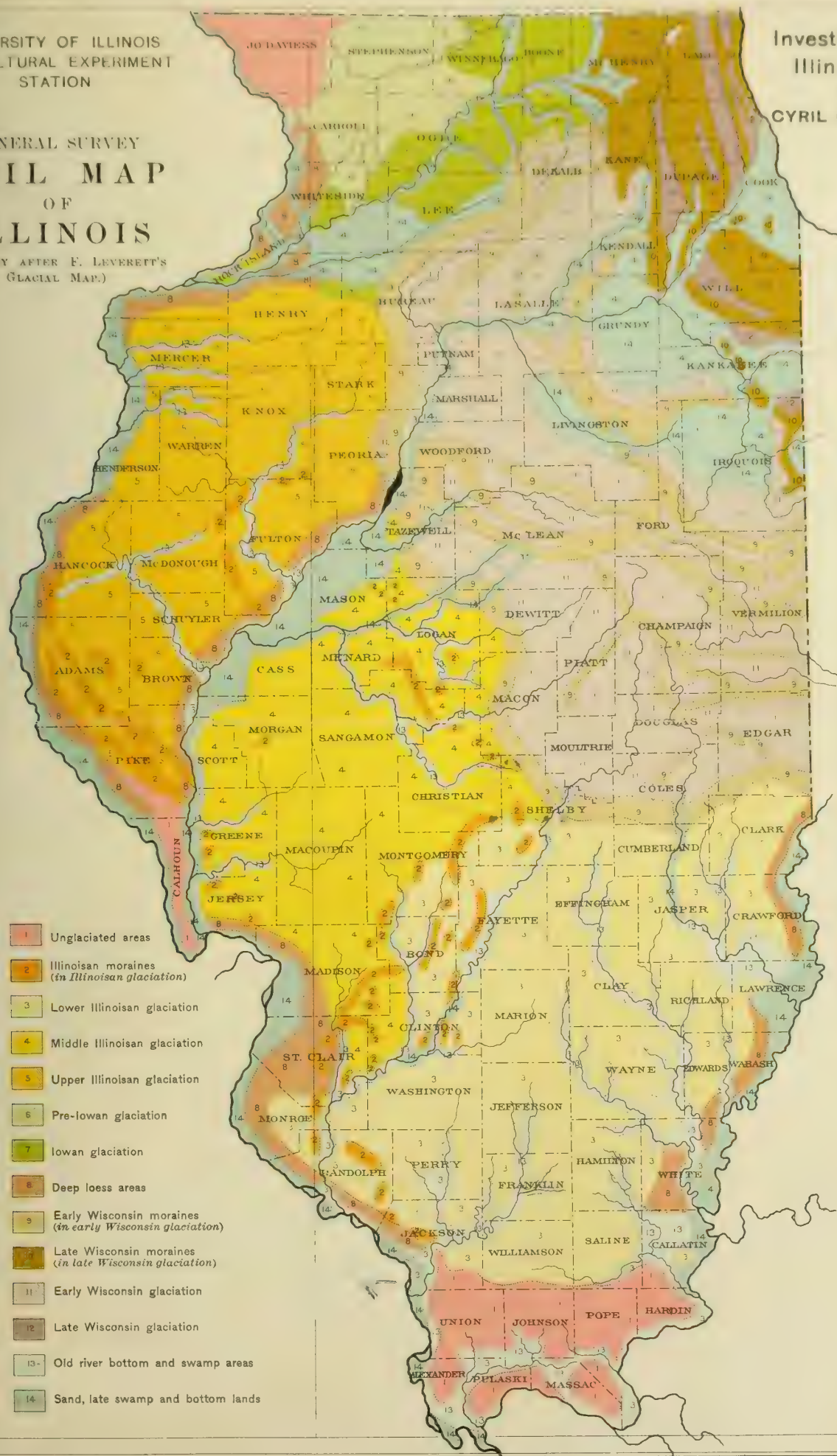
ILLINOIS 1906



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GENERAL SURVEY
SOIL MAP
OF
ILLINOIS

(CHIEFLY AFTER F. LEVERETT'S
GLACIAL MAP.)



- 1 Unglaciated areas
- 2 Illinoian moraines
(in Illinoian glaciation)
- 3 Lower Illinoian glaciation
- 4 Middle Illinoian glaciation
- 5 Upper Illinoian glaciation
- 6 Pre-Iowan glaciation
- 7 Iowan glaciation
- 8 Deep loess areas
- 9 Early Wisconsin moraines
(in early Wisconsin glaciation)
- 10 Late Wisconsin moraines
(in late Wisconsin glaciation)
- 11 Early Wisconsin glaciation
- 12 Late Wisconsin glaciation
- 13 Old river bottom and swamp areas
- 14 Sand, late swamp and bottom lands

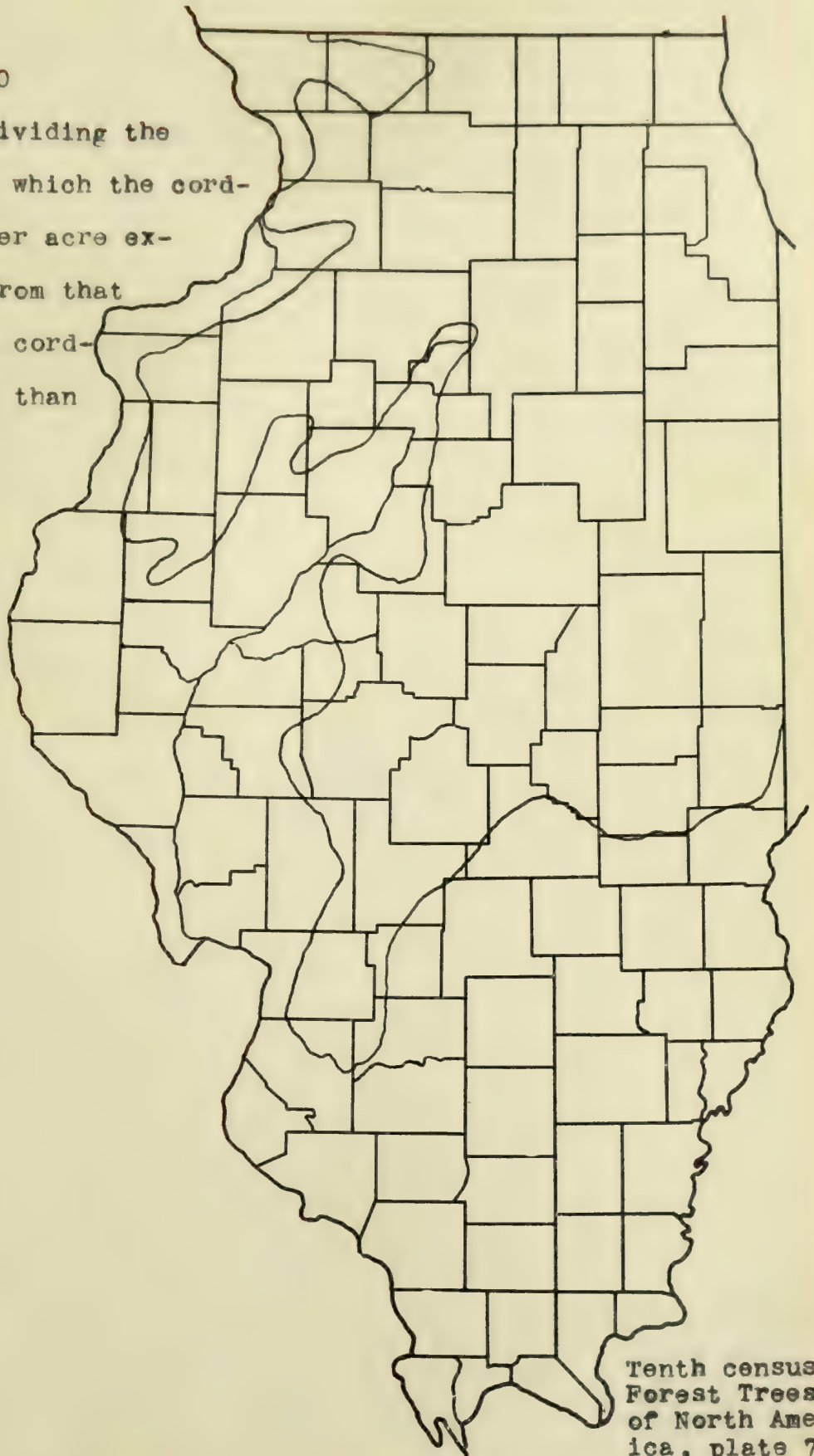
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ILLINOIS

170.

1880

The line dividing the territory in which the cordage of wood per acre exceeded ten from that in which the cordage was less than ten.



Tenth census,
Forest Trees
of North America,
plate 7.

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ILLINOIS

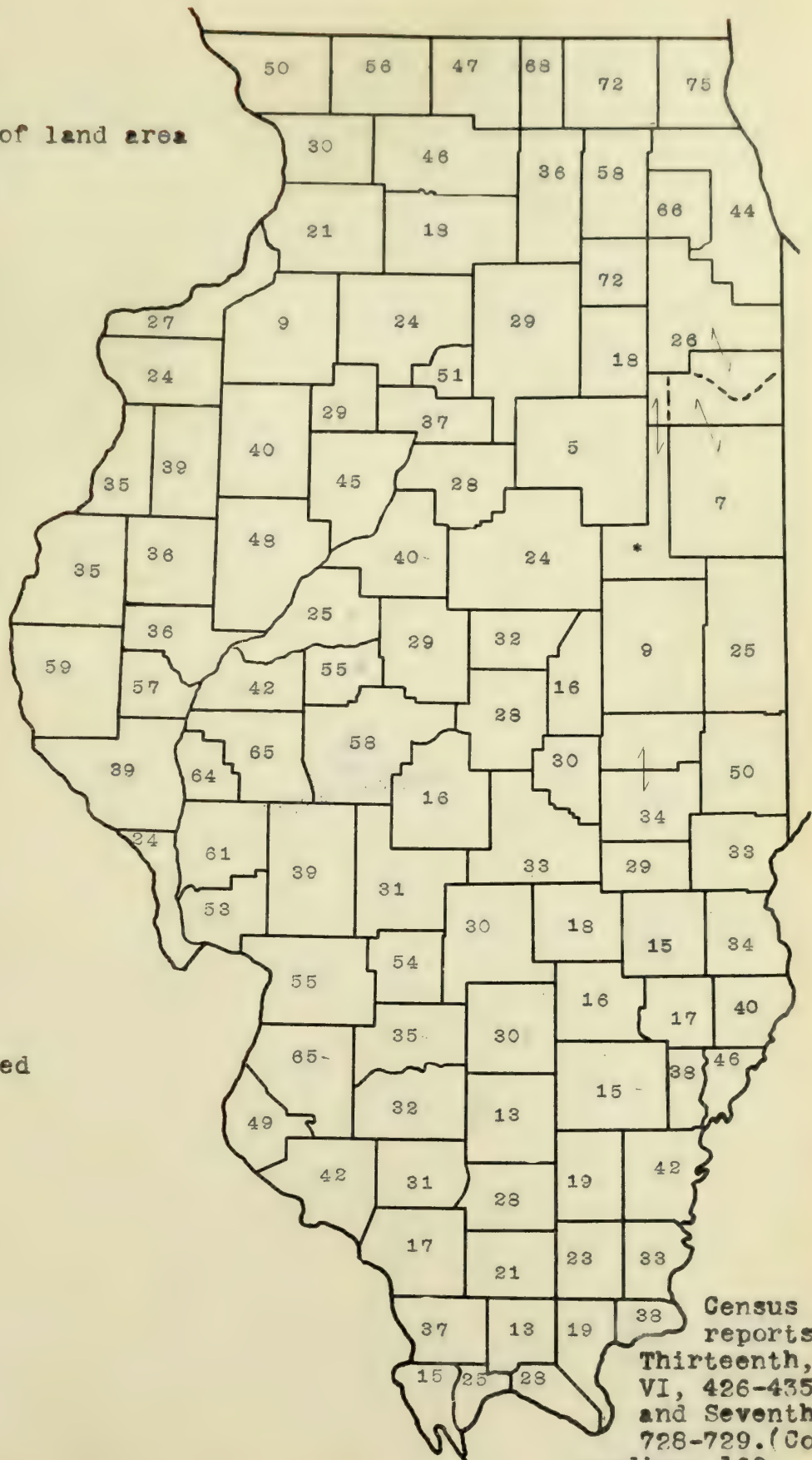
171.

1850

Percentage of land area
in farms

The state,
33.6

* Unorganized



Census
reports:
Thirteenth,
VI, 426-435;
and Seventh,
728-729. (Com-
pendium, 169,
220 and 226.

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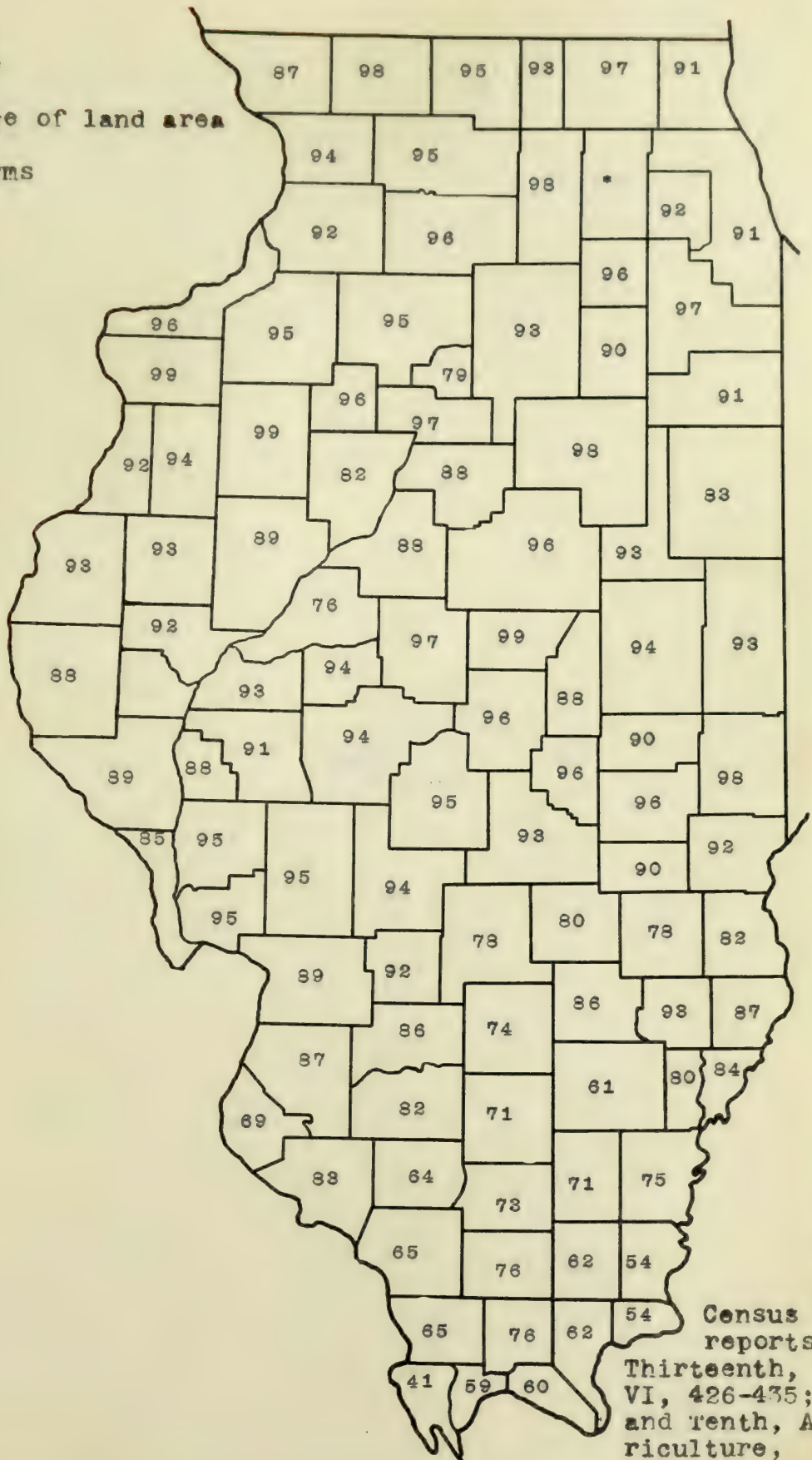
ILLINOIS

172.

1880

Percentage of land area
in farms

The state,
88.6



Census
reports:
Thirteenth,
VI, 426-435;
and tenth, Ag-
riculture,
111-112.

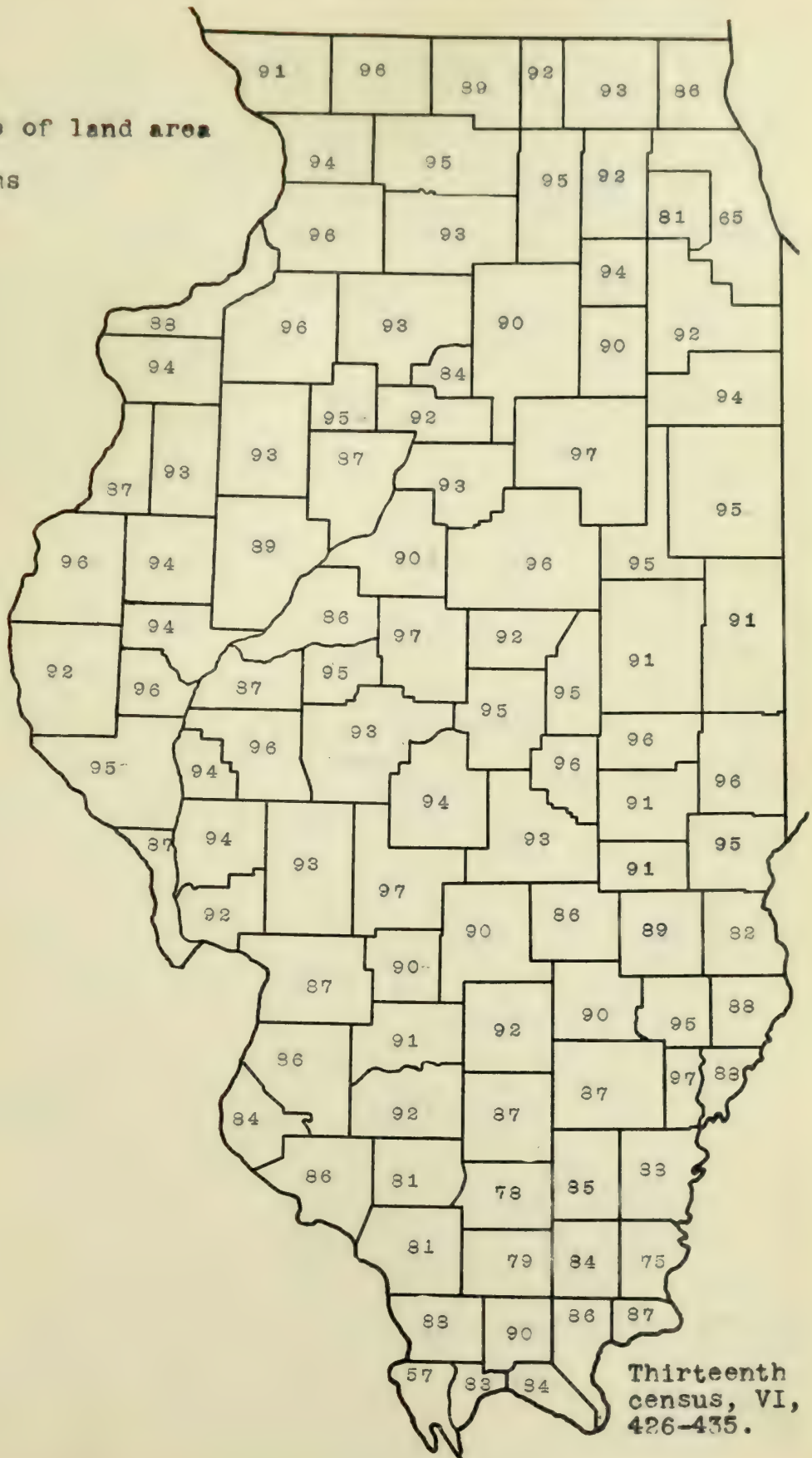
1890-1900

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1910

Percentage of land area
in farms

The state,
90.7



Map of Illinois

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ILLINOIS

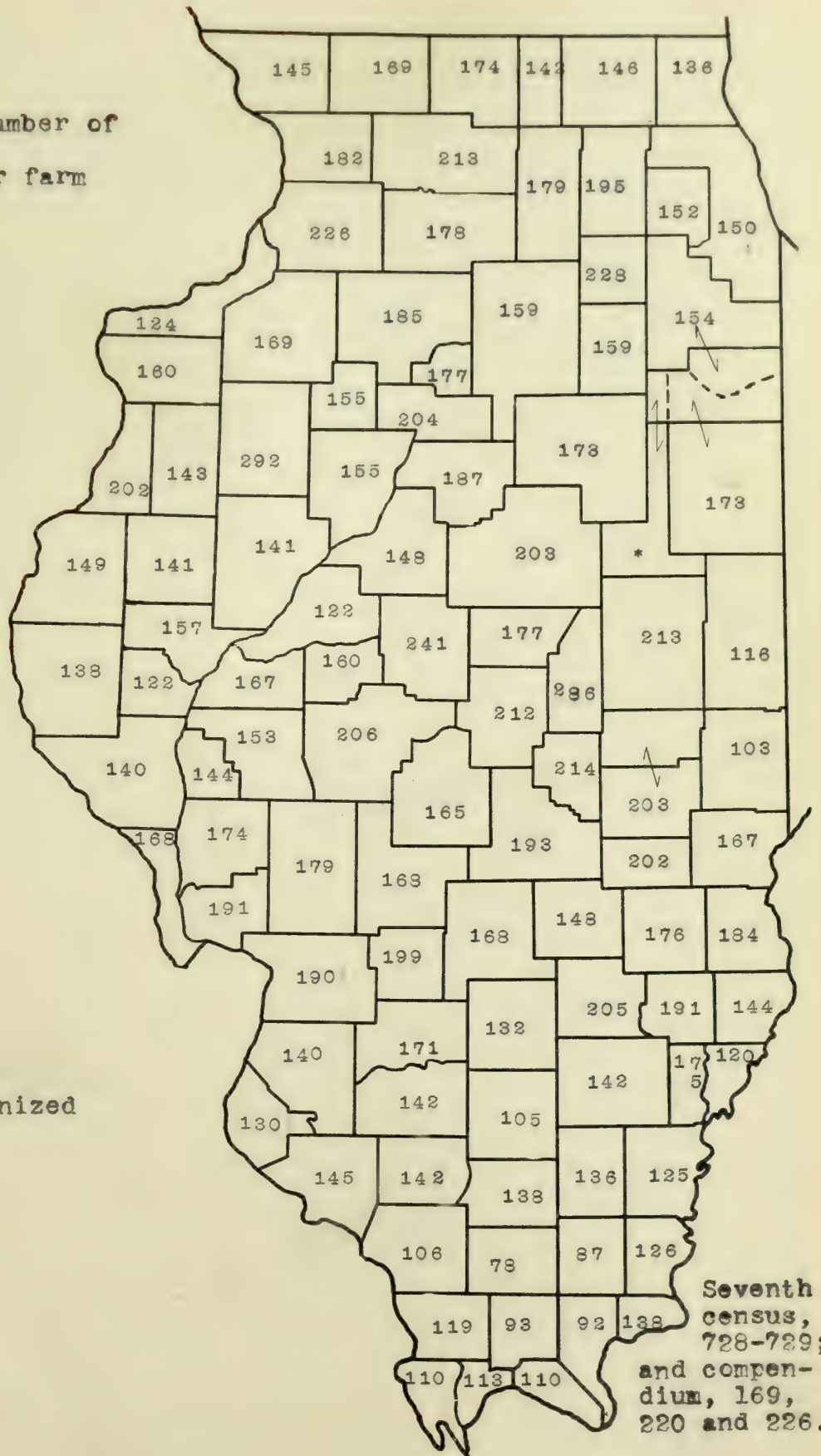
174.

1850

Average number of
acres per farm

The state,
158.0

* Unorganized



Seventh
census,
728-729;
and compen-
dium, 169,
220 and 226.

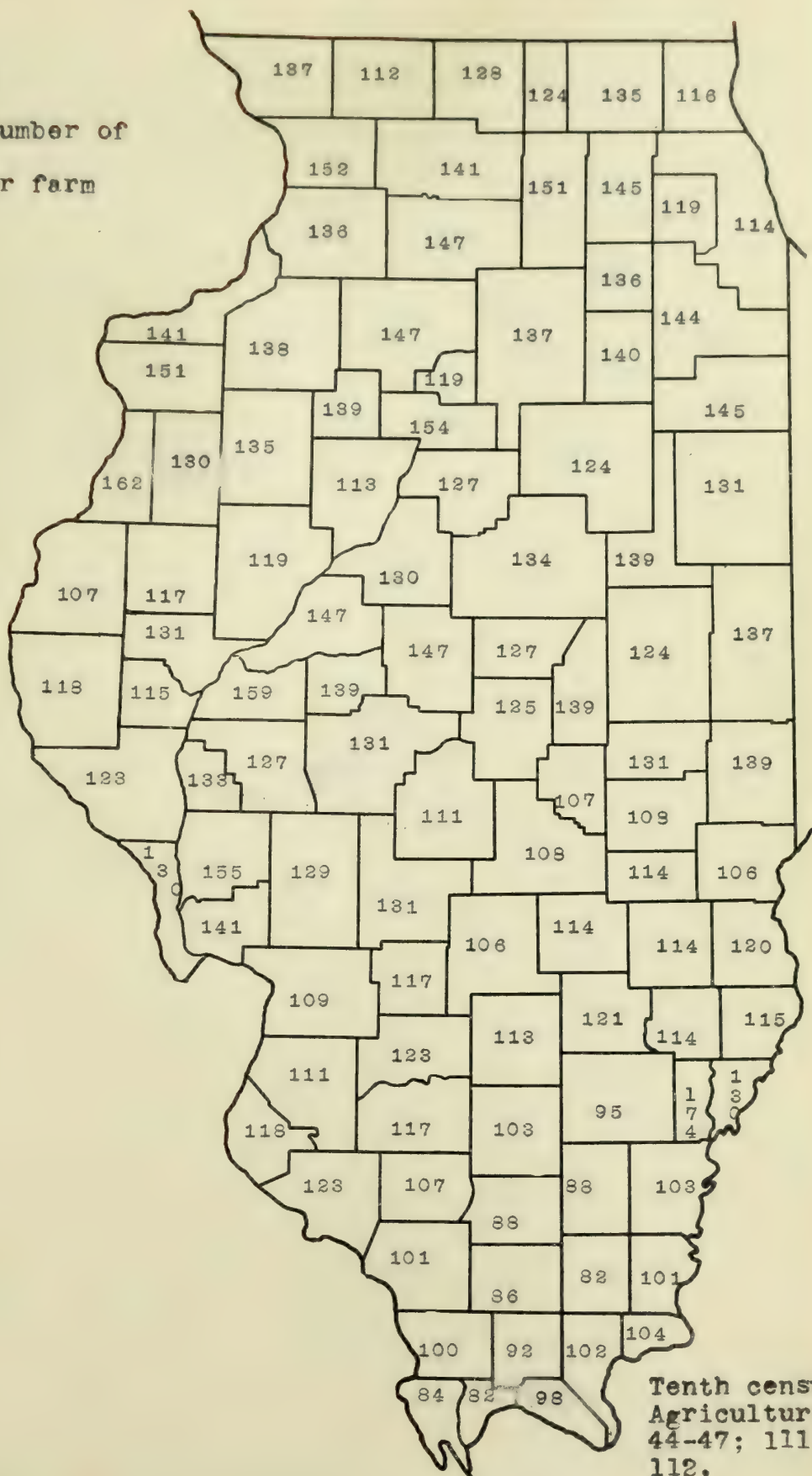


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1880

Average number of
acres per farm

The state,
123.8



Tenth census
Agriculture,
44-47; 111-
112.

Map of the
County of
Hampden

Scale of Miles
0 1 2 3 4 5

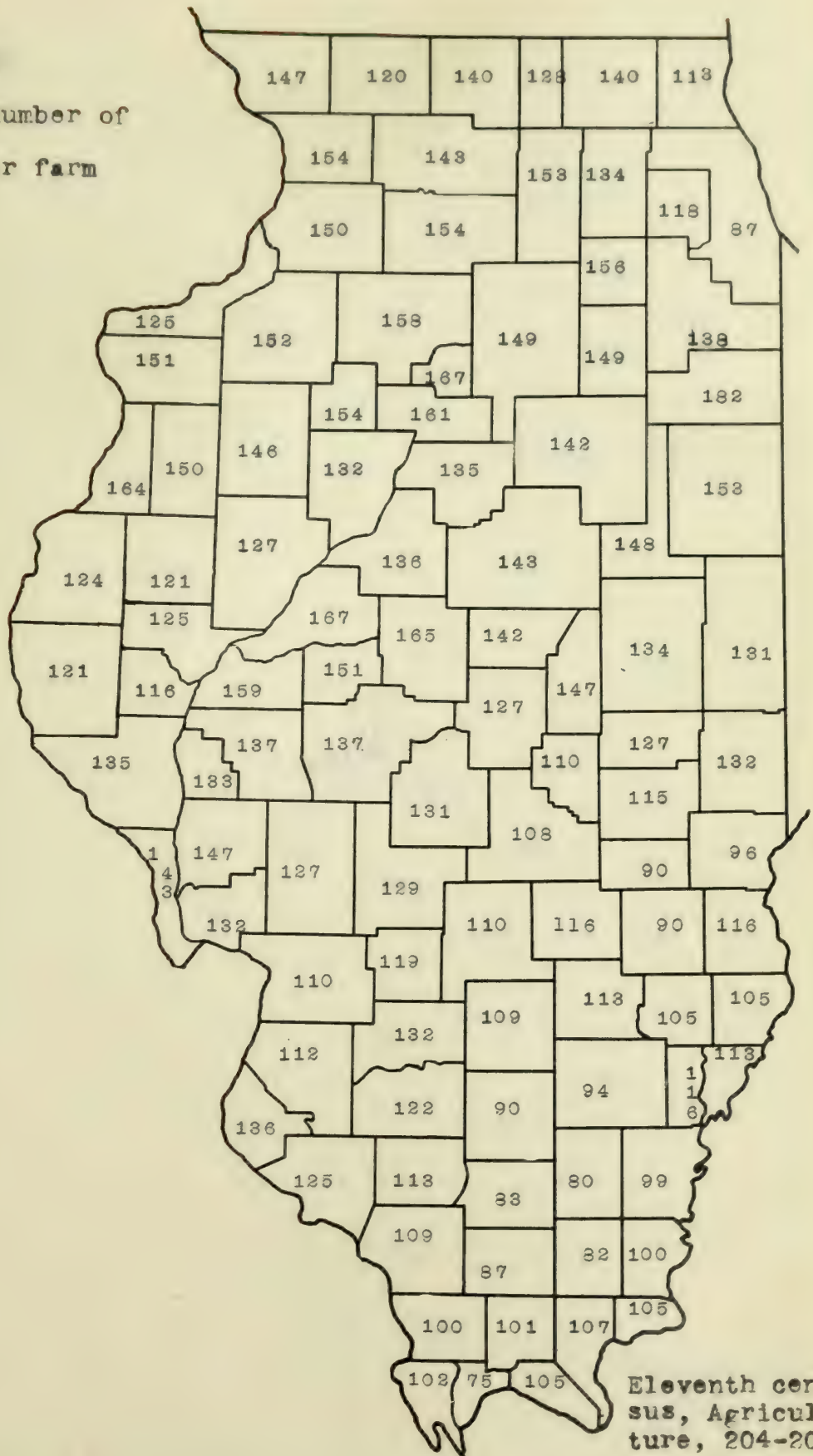
ILLINOIS

176.

1890

Average number of
acres per farm

The state,
126.7



Eleventh cen-
sus, Agricul-
ture, 204-206

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OF THE
UNIVERSITY OF ILLINOIS

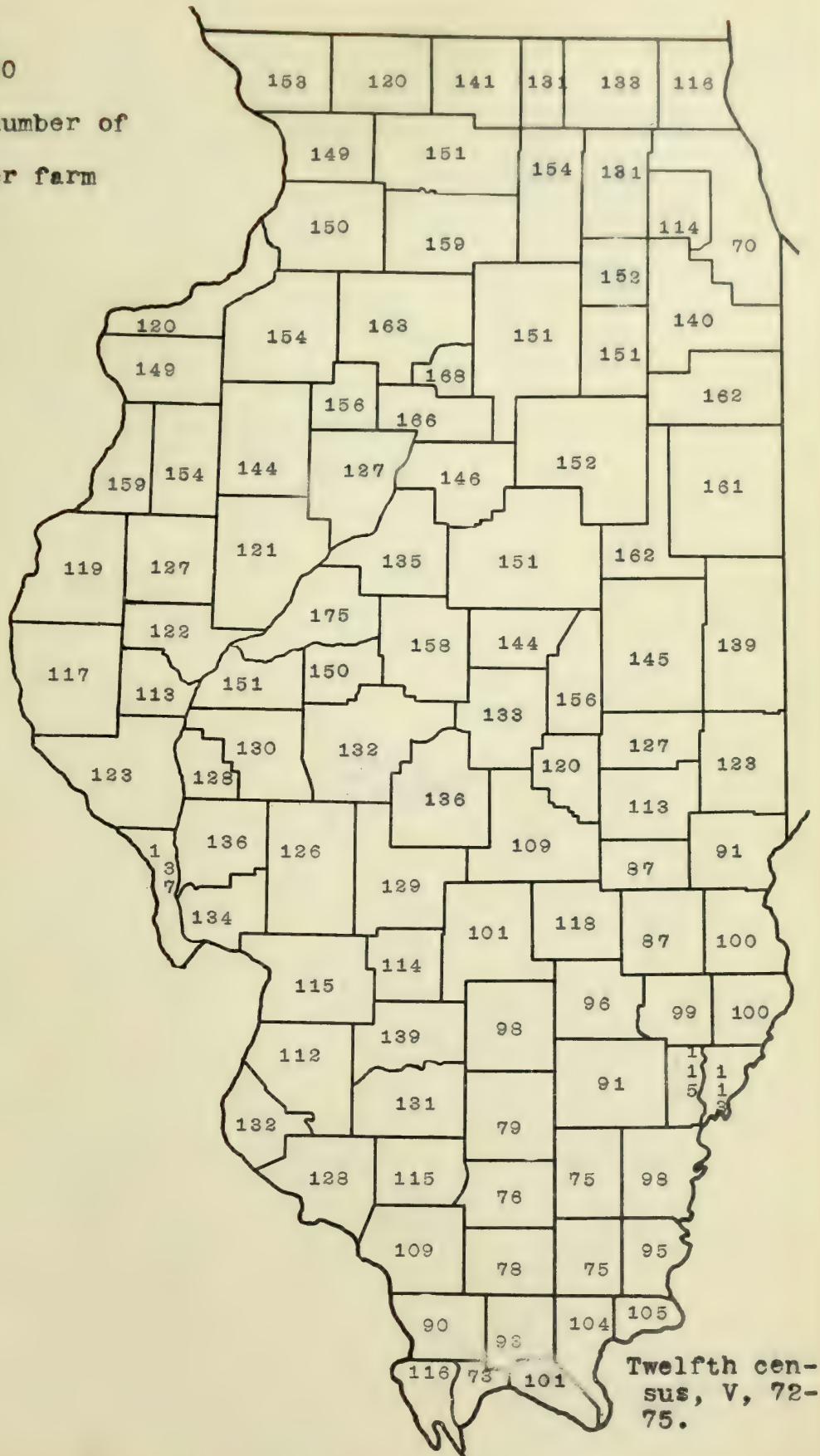
ILLINOIS

177.

1900

Average number of
acres per farm

The state,
124.2



Twelfth cen-
sus, V, 72-
75.

1890

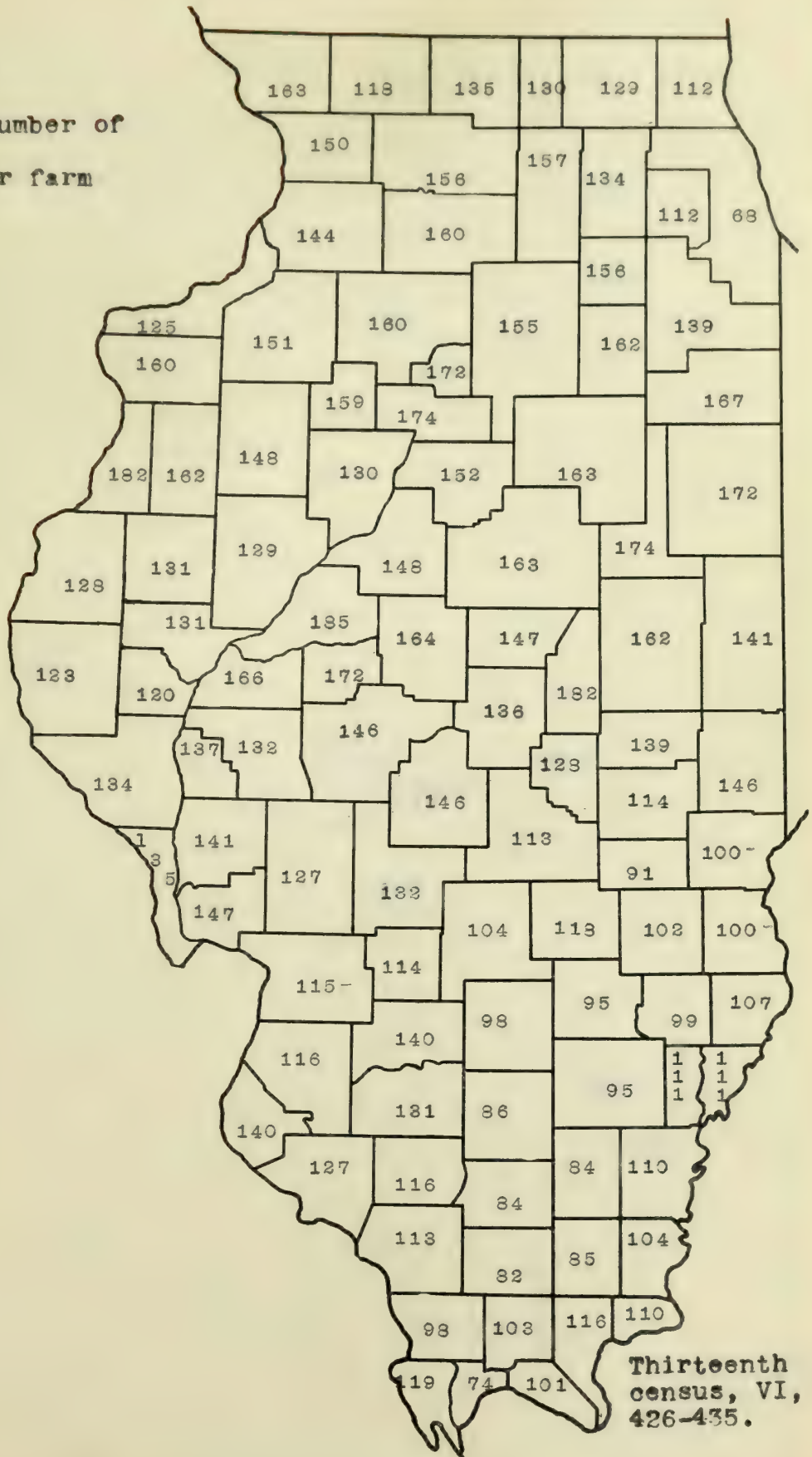
1890

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

178.

Average number of
acres per farm

The state,
129.1



Thirteenth
census, VI,
426-435.

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

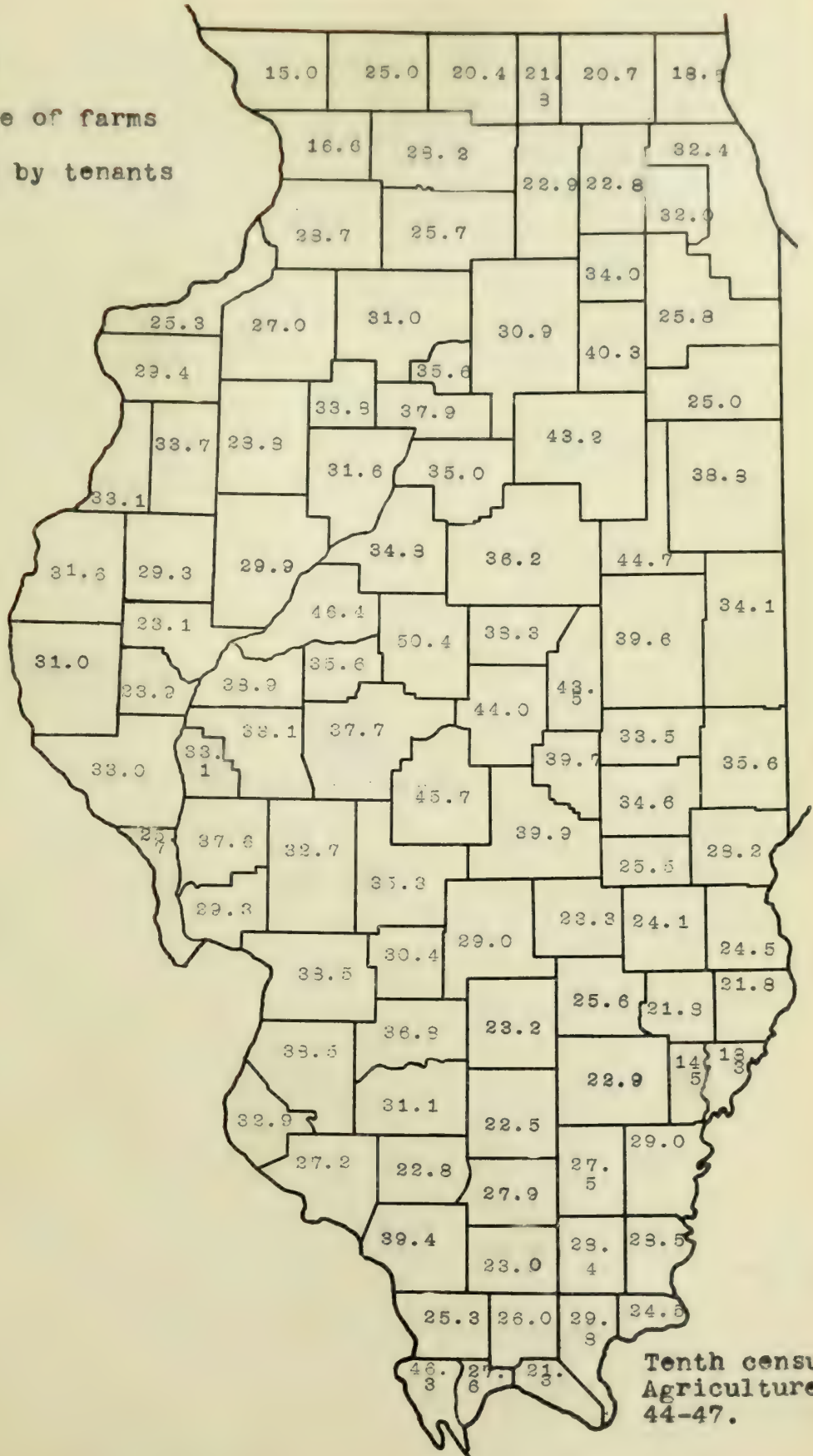
ILLINOIS

179.

1880

Percentage of farms
operated by tenants

The state,
31.4



Tenth census,
Agriculture,
44-47.

1870-1871

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OF THE
UNIVERSITY OF ALABAMA

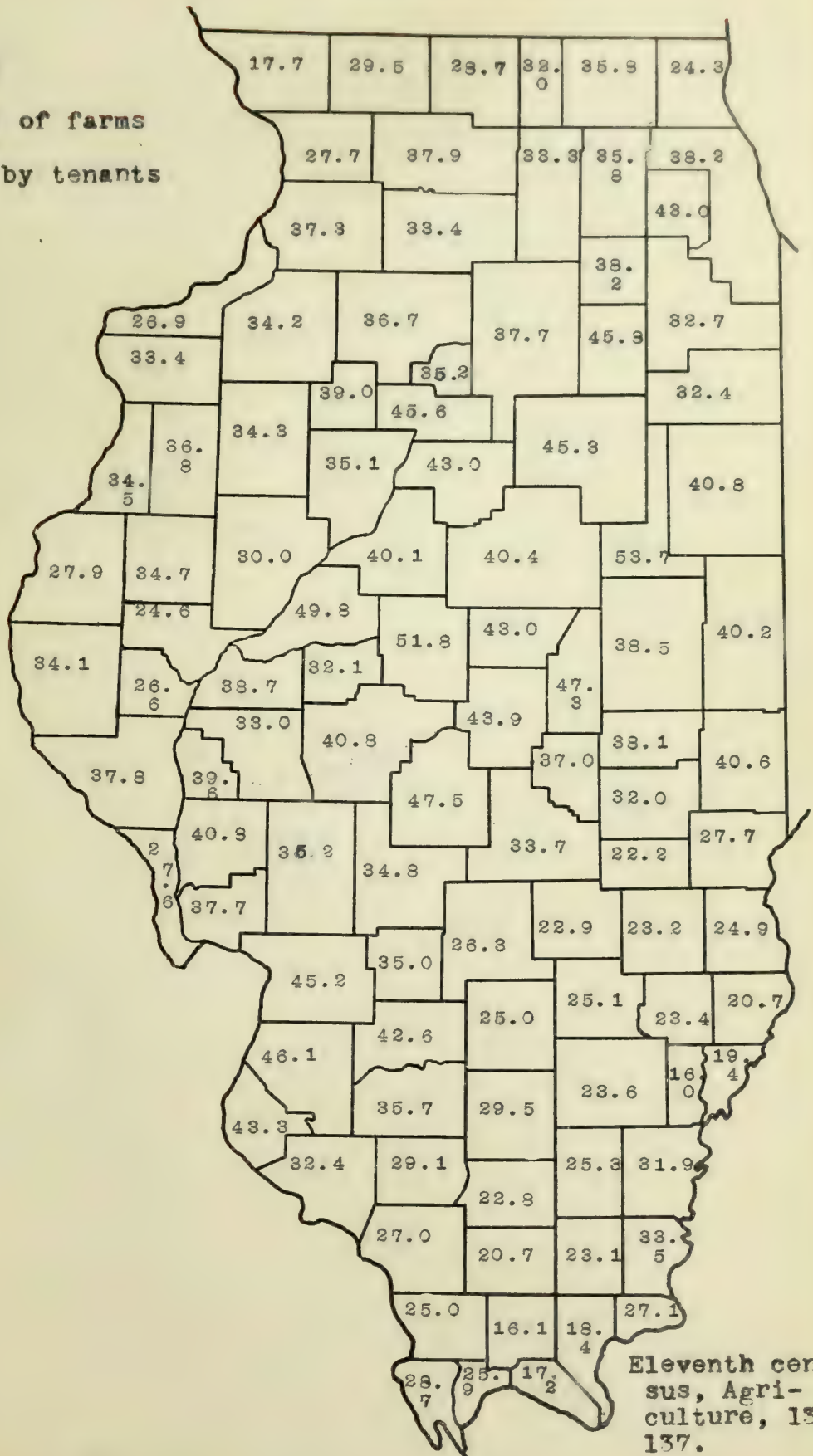
ILLINOIS

180.

1890

Percentage of farms
operated by tenants

The state,
34.0



Eleventh cen-
sus, Agri-
culture, 135
137.

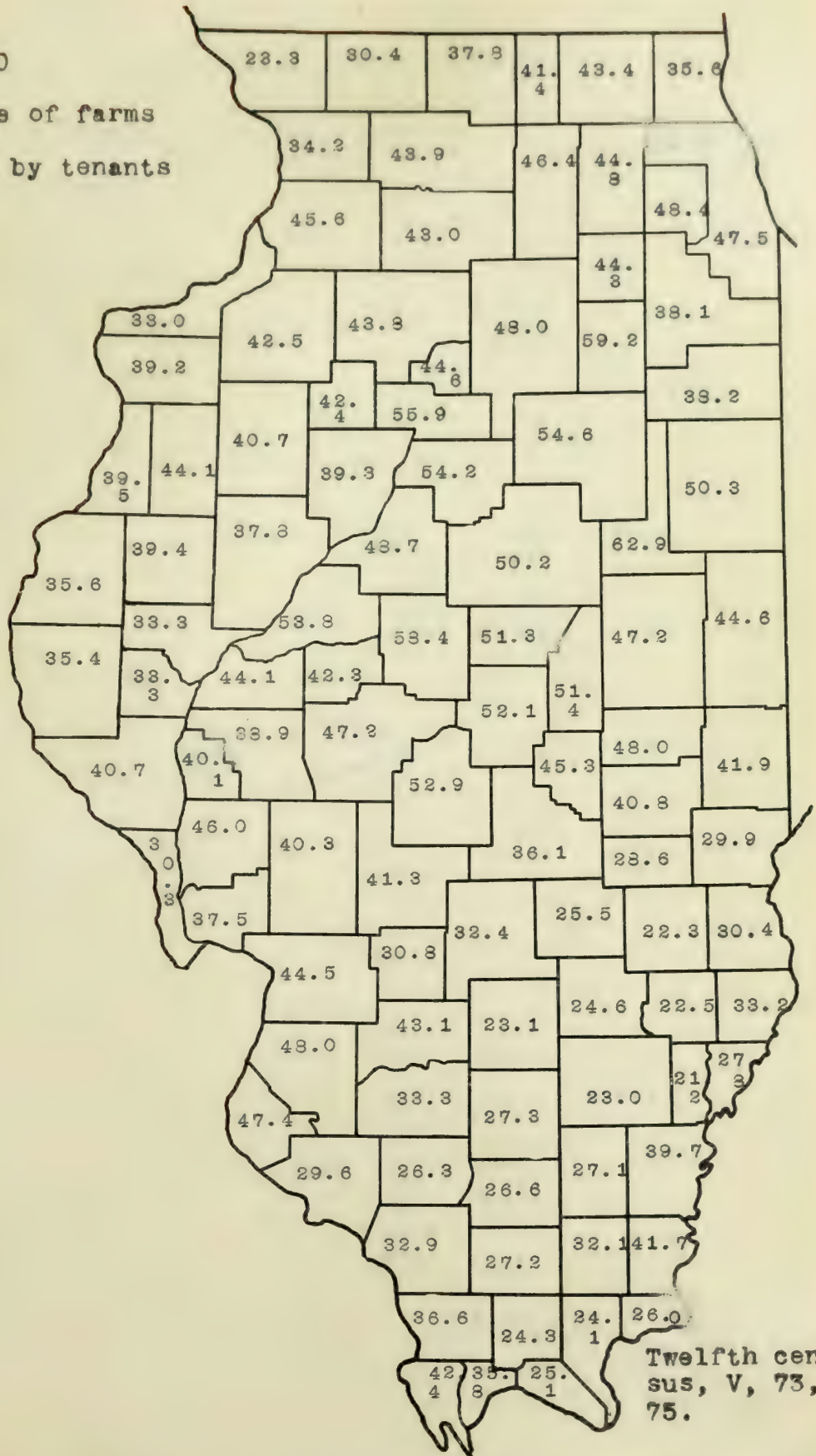
ILLINOIS

181.

1900

Percentage of farms
operated by tenants

The state,
39.3



Twelfth cen-
sus, V, 73,
75.

THE UNIVERSITY OF MICHIGAN
LIBRARY

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OF THE
UNIVERSITY OF MICHIGAN

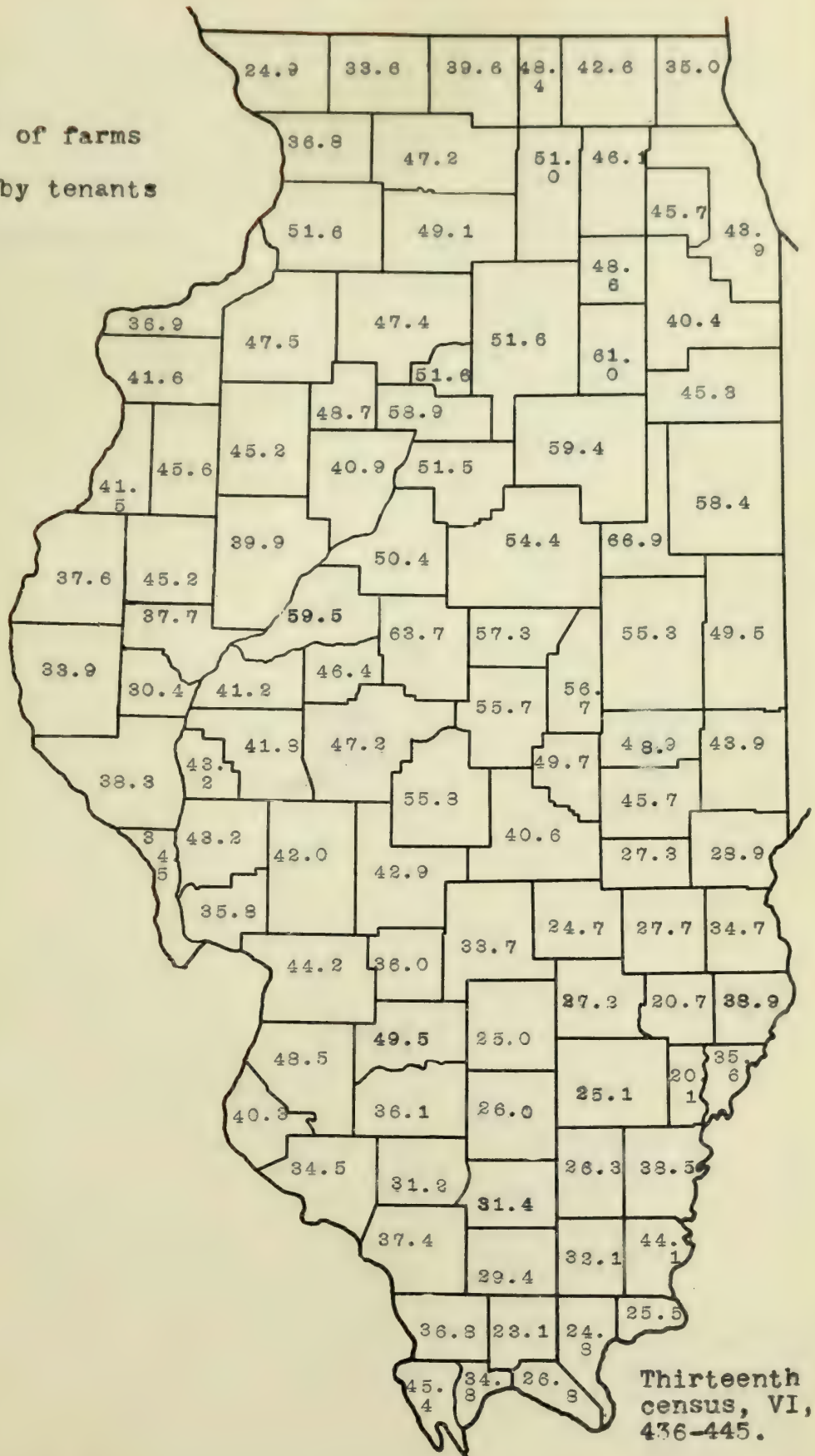
ILLINOIS

182.

1910

Percentage of farms
operated by tenants

The state,
41.4



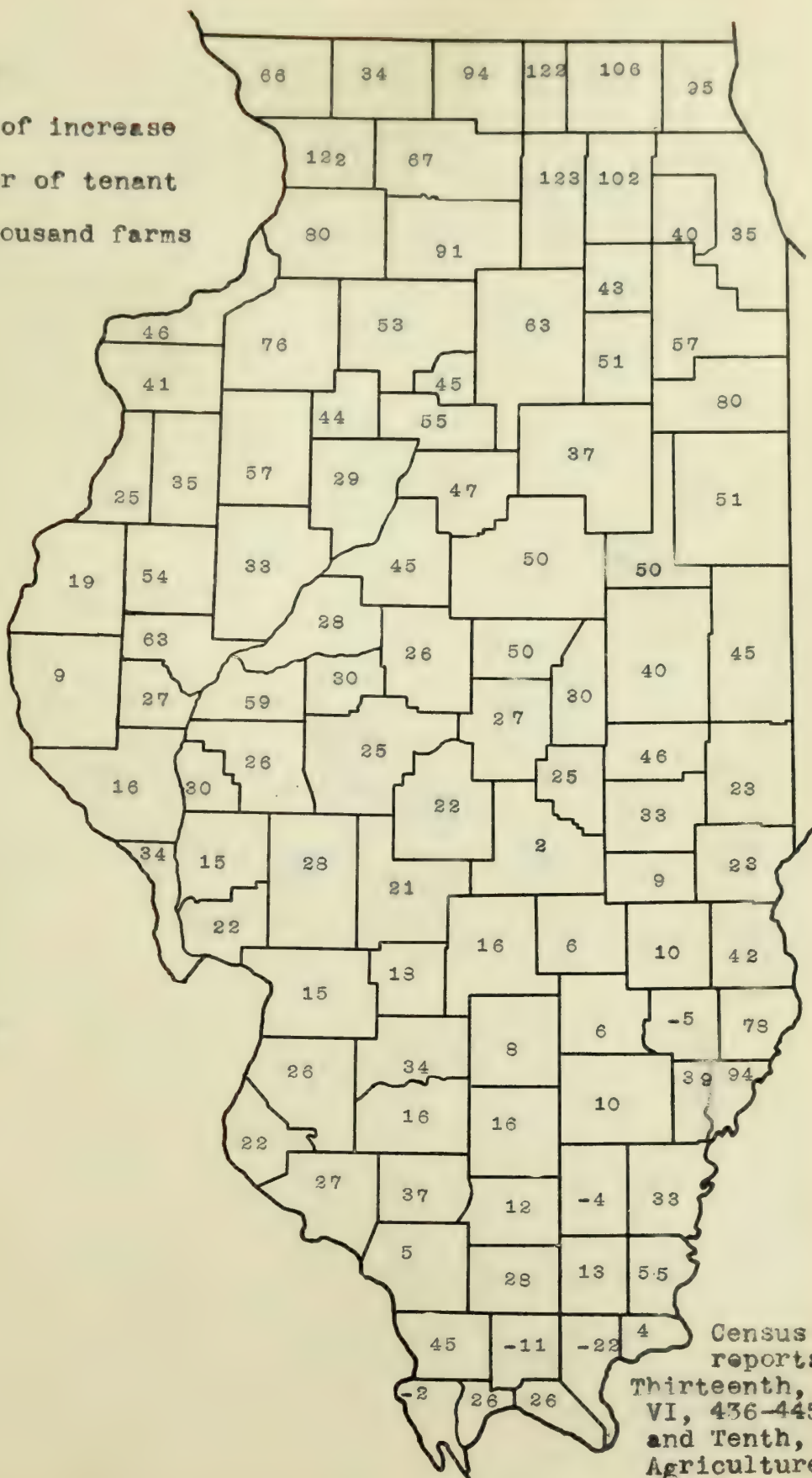
Thirteenth
census, VI,
436-445.

LIBRARY
OF THE
UNIVERSITY OF KANSAS

Percentage of increase
in the number of tenant
farms per thousand farms

The state,
31.8

- Decrease



4 Census
reports:
Thirteenth,
VI, 436-445;
and Tenth,
Agriculture,
44-47.

Map of the County of the Highland of Scotland



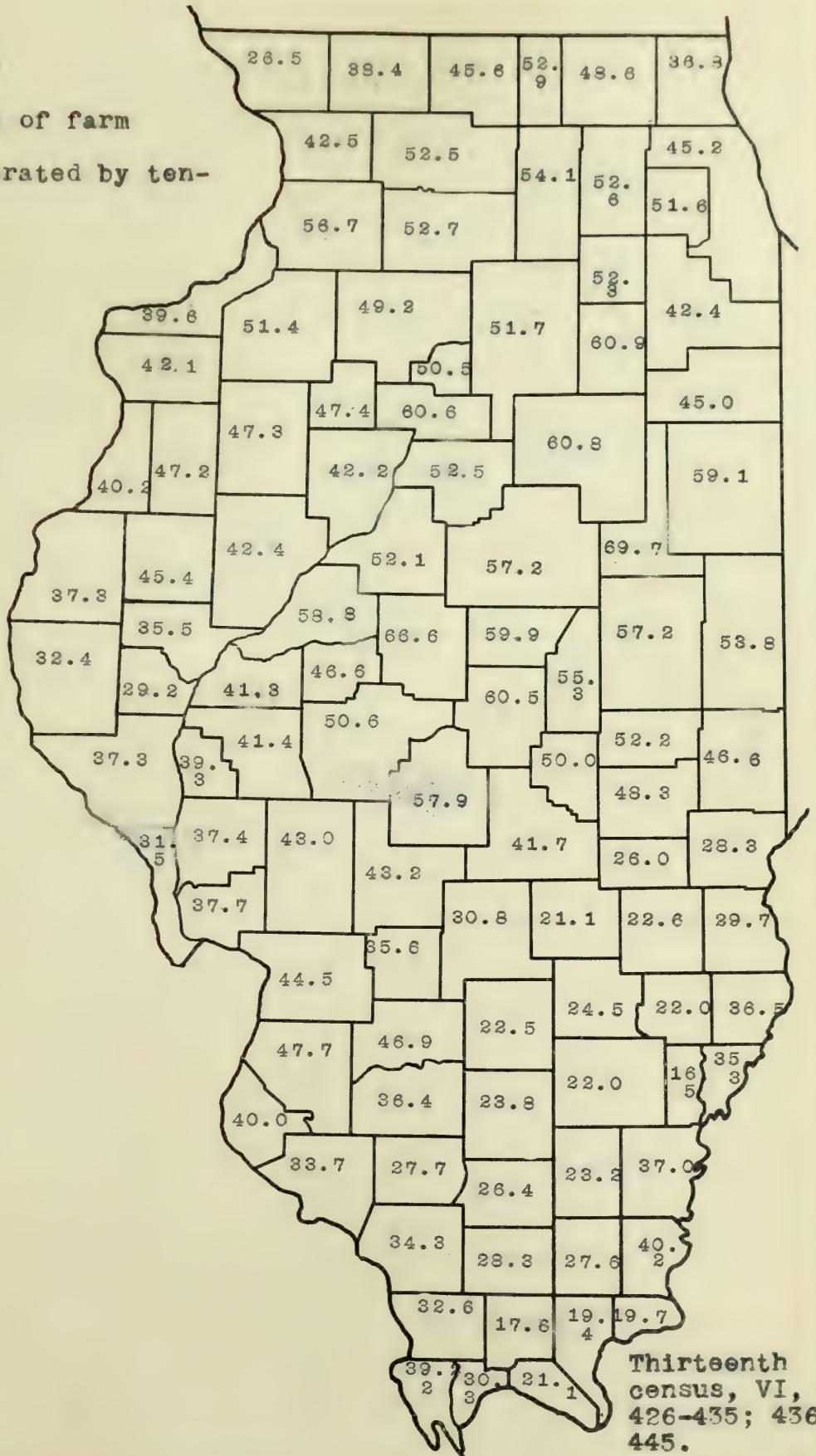
Map of the
County of the
Highland of Scotland

ILLINOIS

1910

Percentage of farm
acreage operated by ten-
ants

The state,
43.59

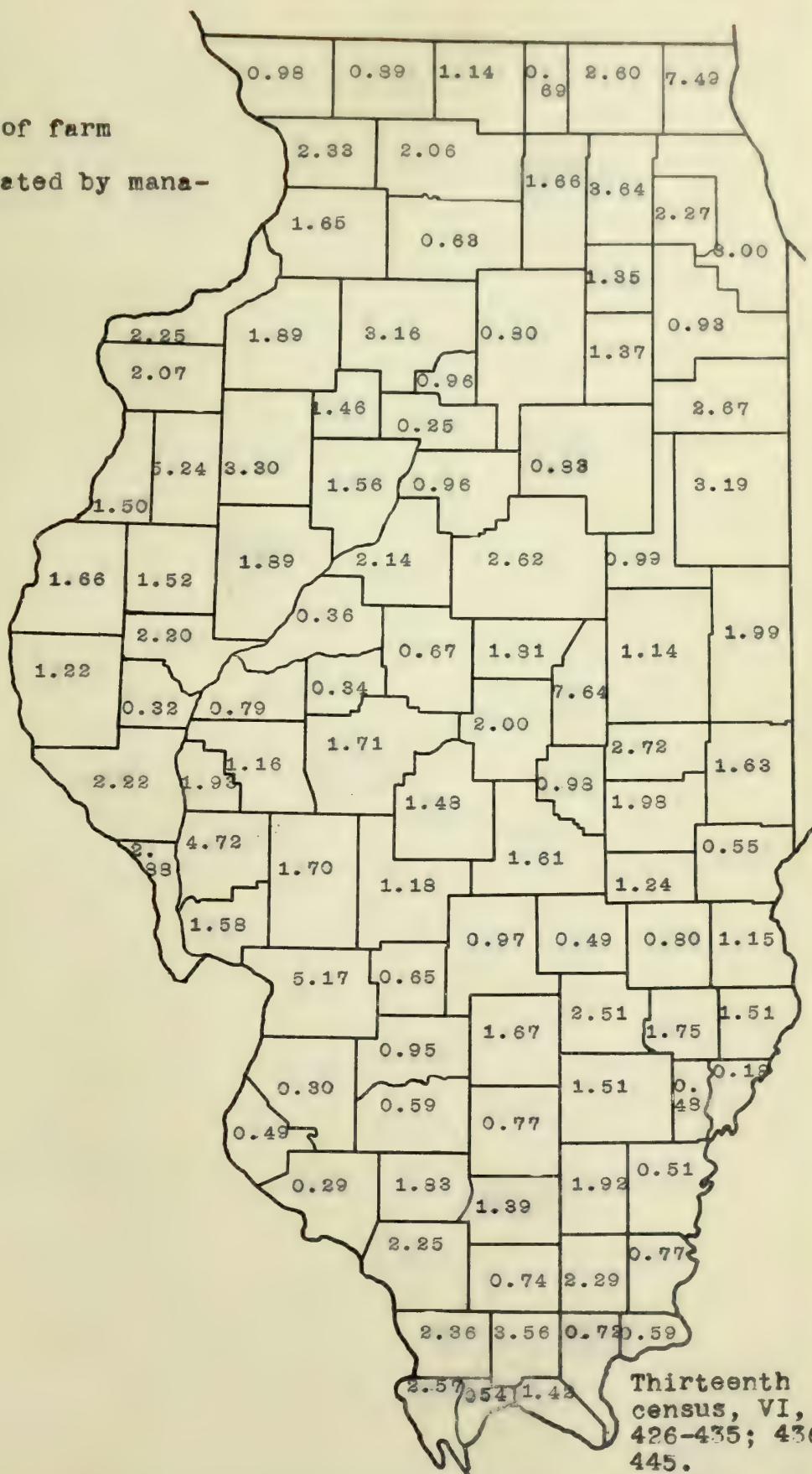


Thirteenth
census, VI,
426-435; 436-
445.

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OF THE
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Percentage of farm
acreage operated by mana-
gers

The state,
1.72



Thirteenth
census, VI,
426-435; 436-
445.

1898 (1898)

History
of the
University of Illinois

ILLINOIS

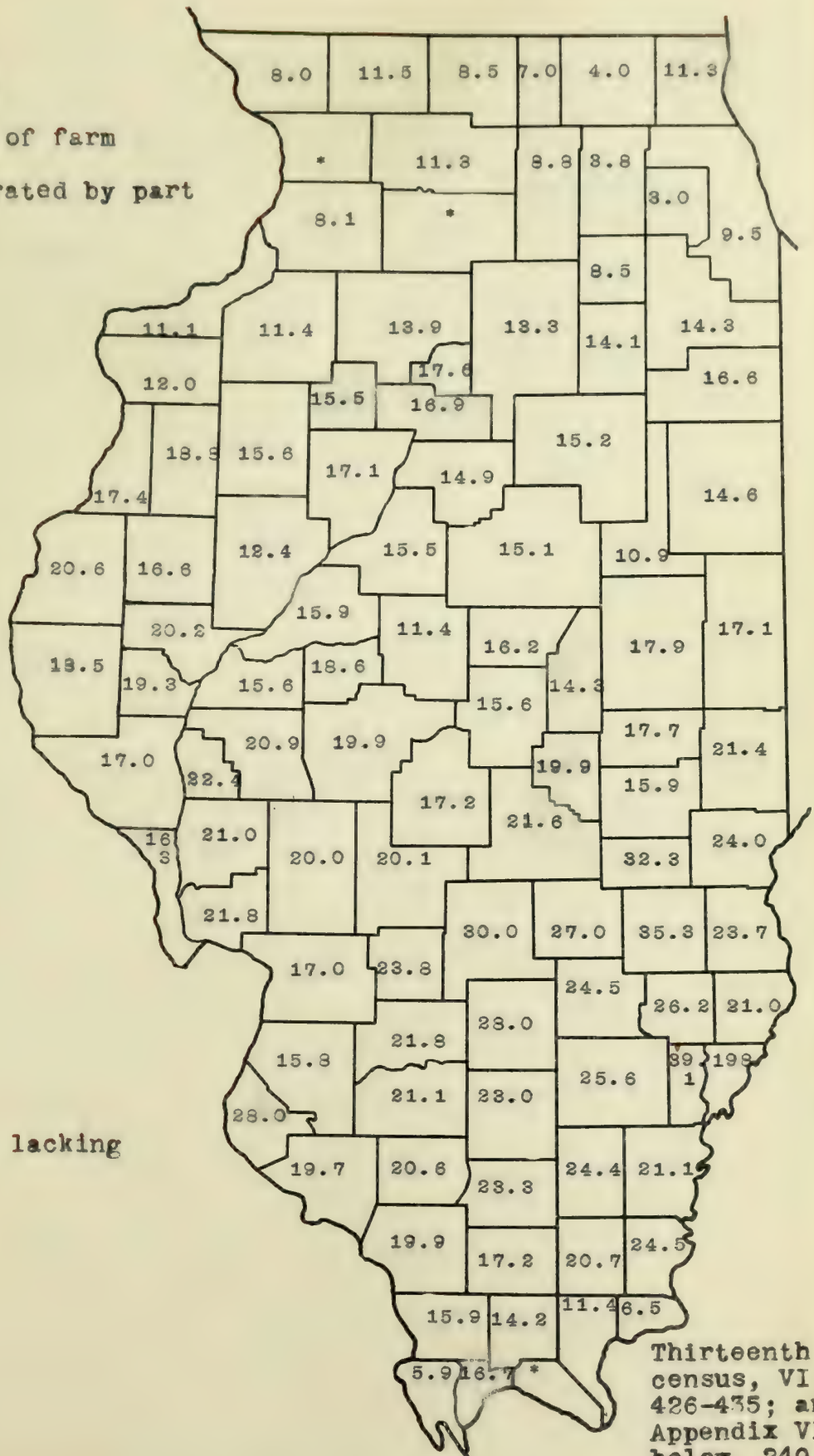
1910

Percentage of farm
acreage operated by part
owners

The state,
17.15

*

Data lacking

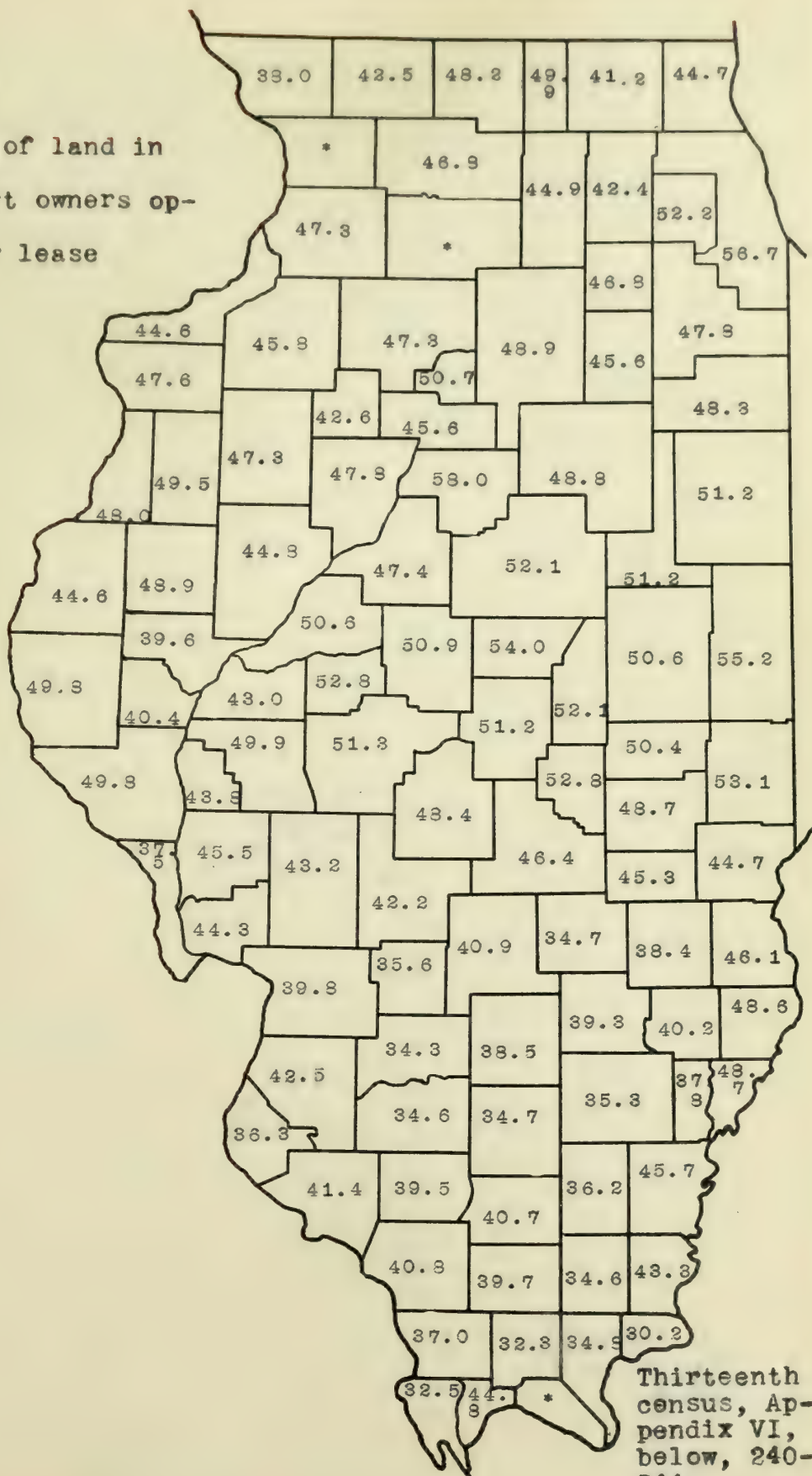


Thirteenth
census, VI,
426-435; and
Appendix VI,
below, 240-
244.

Library
of the
University of Toronto

Percentage of land in
farms of part owners op-
erated under lease

The state,
44.7



Thirteenth
census, Ap-
pendix VI,
below, 240-
244.

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896

1897

1898

1899

1900

1901

1902

1903

1904

1905

1906

1907

1908

1909

LIBRARY
OF THE
UNIVERSITY OF WISCONSIN

ILLINOIS

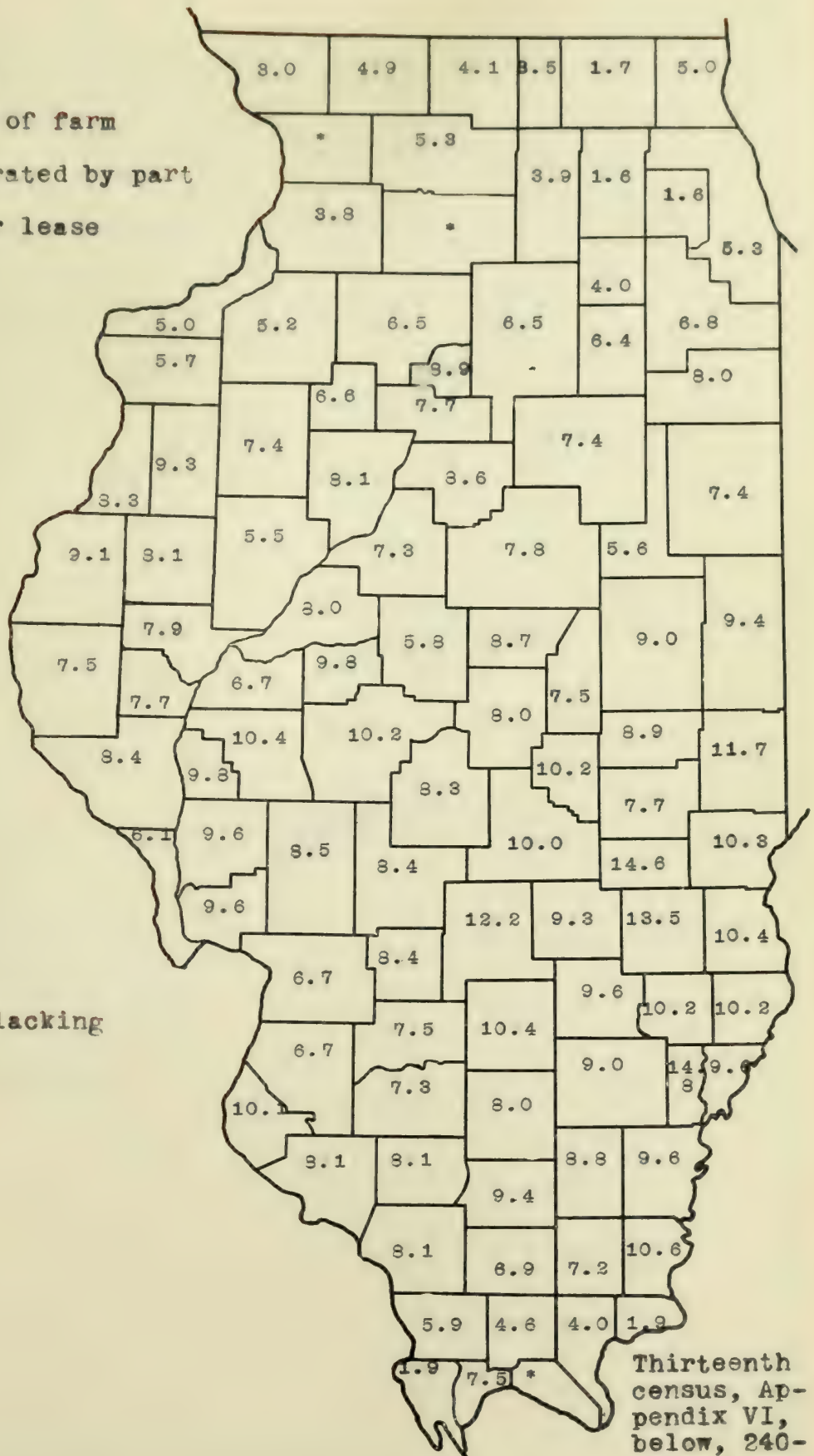
188.

1910

Percentage of farm
acreage operated by part
owners under lease

The state,
7.43

* Data lacking



Thirteenth
census, Ap-
pendix VI,
below, 240-
244.



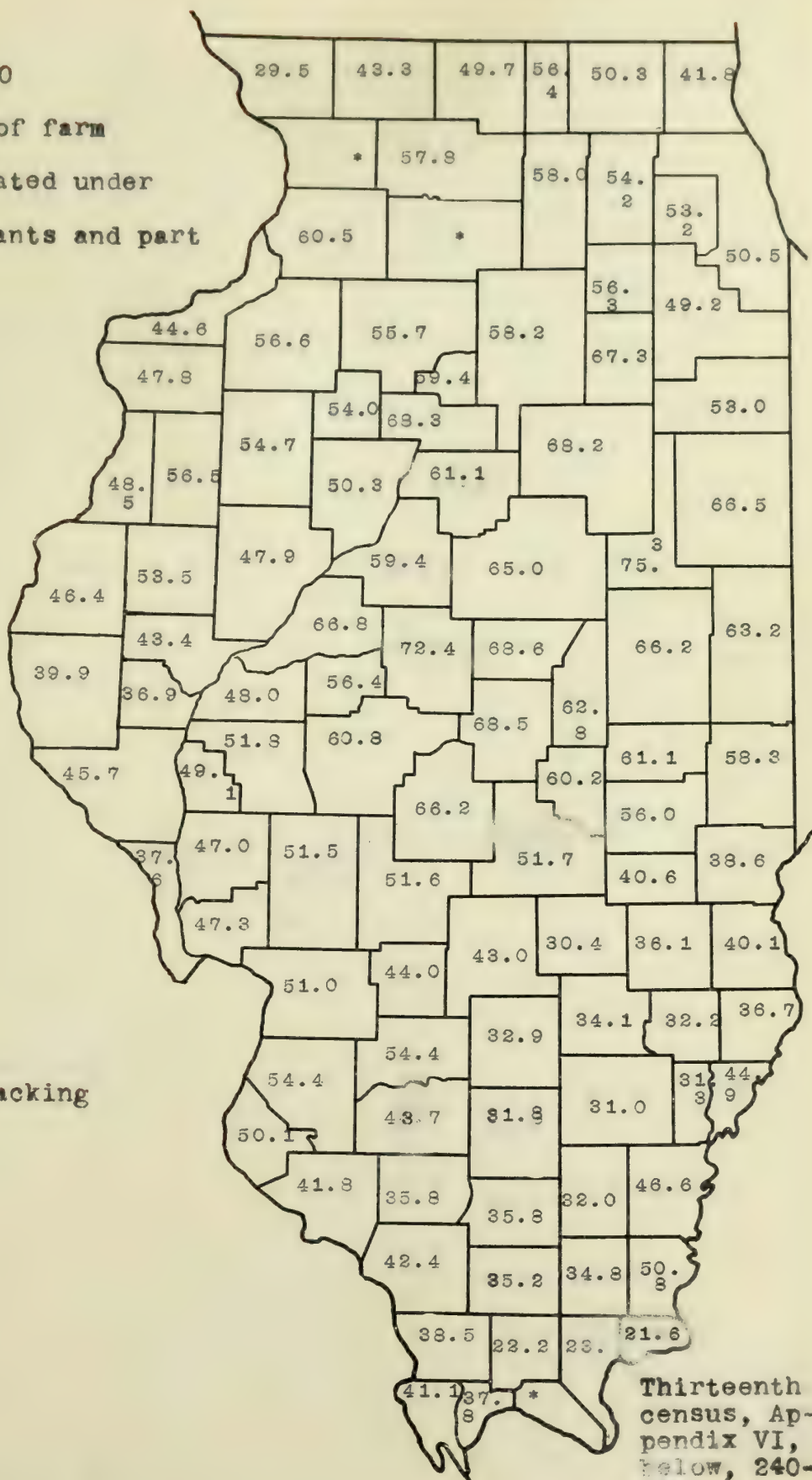
Library
of the
UNIVERSITY OF ALABAMA

189.

Percentage of farm
acreage operated under
lease by tenants and part
owners

The state,
51.01

* Data lacking



Thirteenth
census, Ap-
pendix VI,
below, 240-
244.

THE
UNIVERSITY OF
MICHIGAN

THE
UNIVERSITY OF
MICHIGAN

LIBRARY
OF THE
UNIVERSITY OF MICHIGAN

ILLINOIS

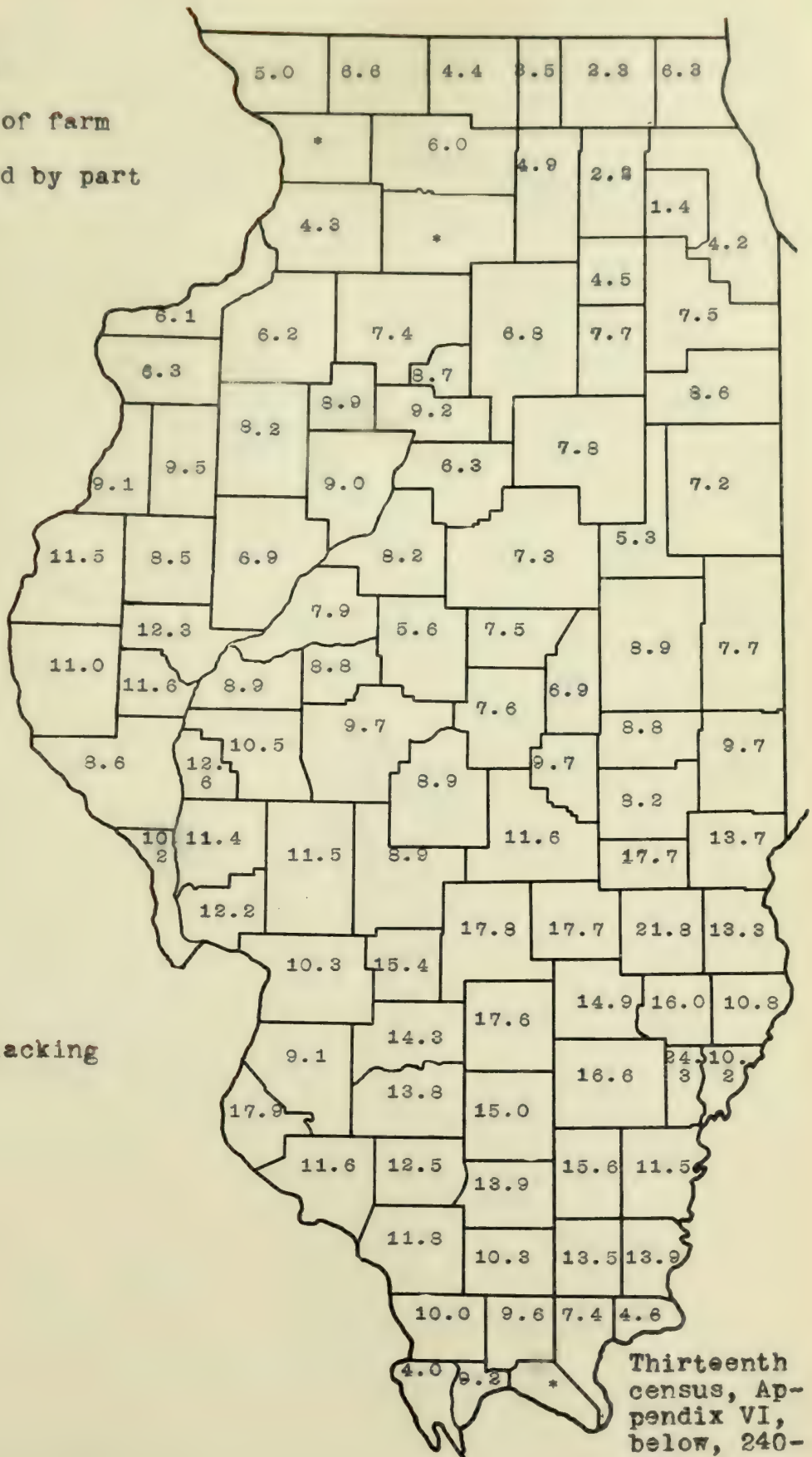
190.

1910

Percentage of farm
acreage owned by part
owners

The state,
9.73

* Data lacking



Thirteenth
census, Ap-
pendix VI,
below, 240-
244.

THE UNIVERSITY OF CHICAGO
LIBRARY

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

ILLINOIS

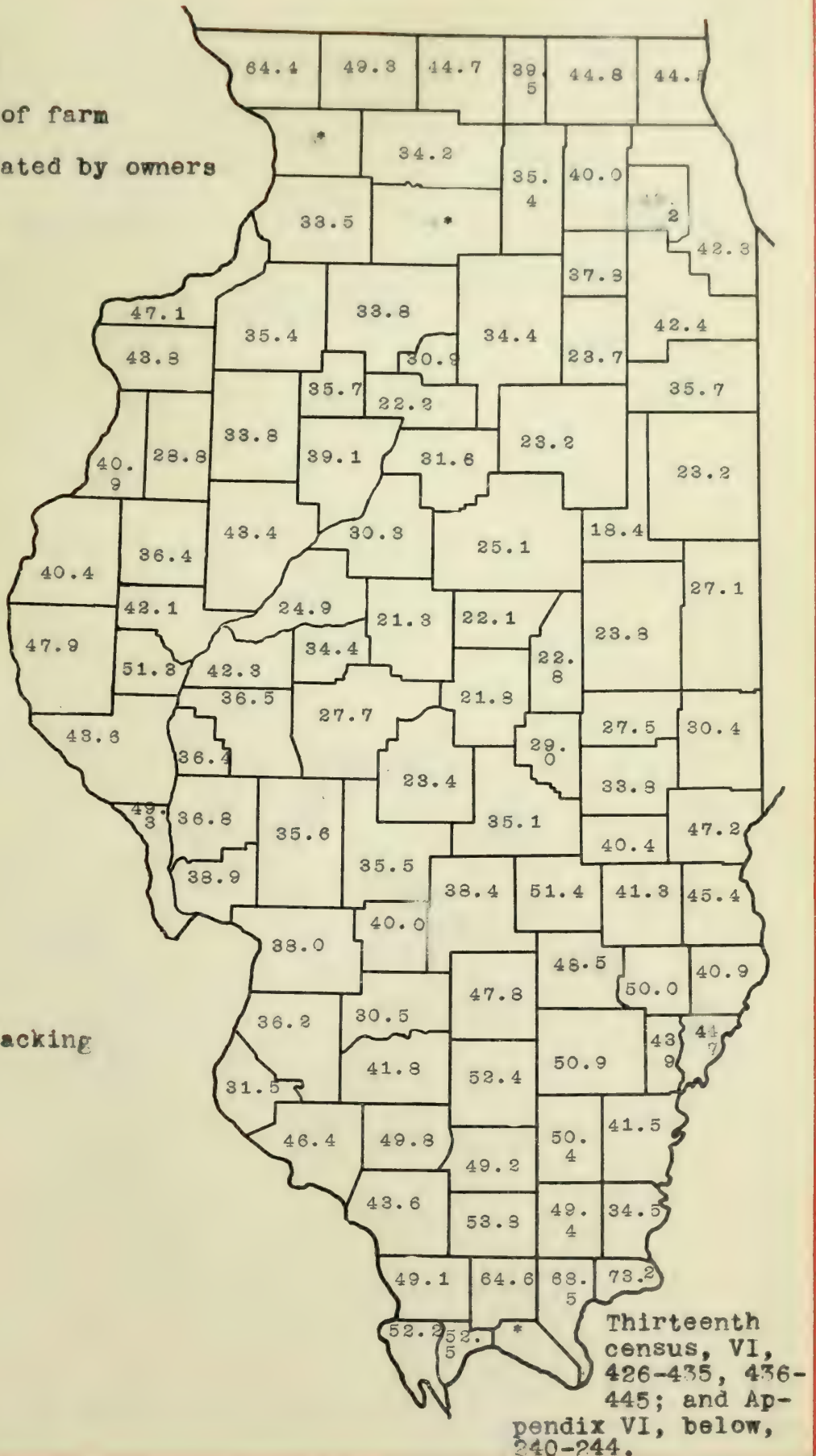
191.

1910

Percentage of farm
acreage operated by owners
proper

The state,
37.54

* Data lacking



1900

1900

1900

1900

1900

1900

UNIVERSITY OF TORONTO

ILLINOIS

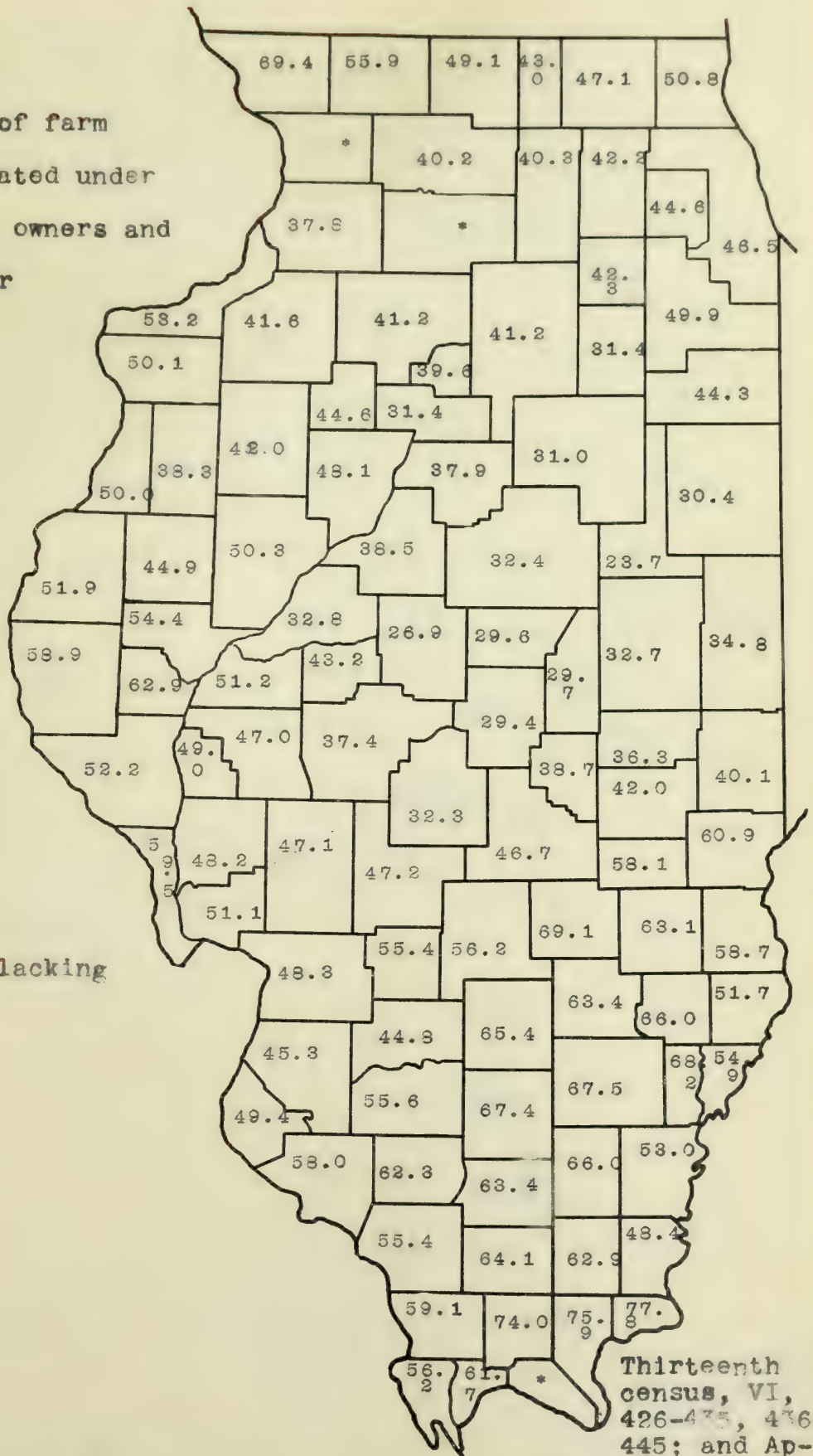
192.

1910

Percentage of farm
acreage operated under
deed by part owners and
owners proper

The state,
47.28

* Data lacking



Thirteenth
census, VI,
426-435, 436-
445; and Ap-
pendix VI, below, 240-
244.

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OF THE
UNIVERSITY OF TORONTO

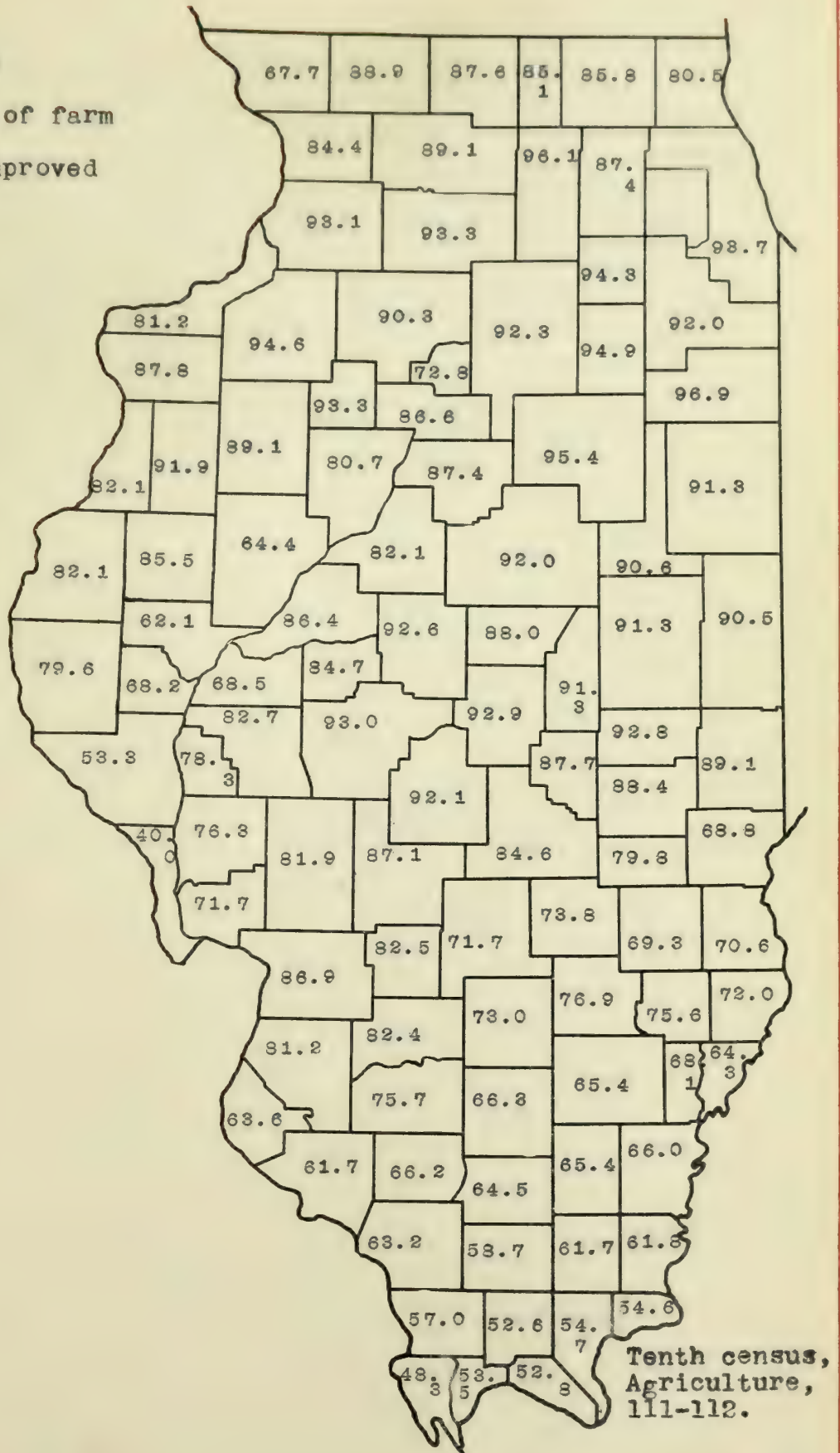
ILLINOIS

193.

1880

Percentage of farm
acreage improved

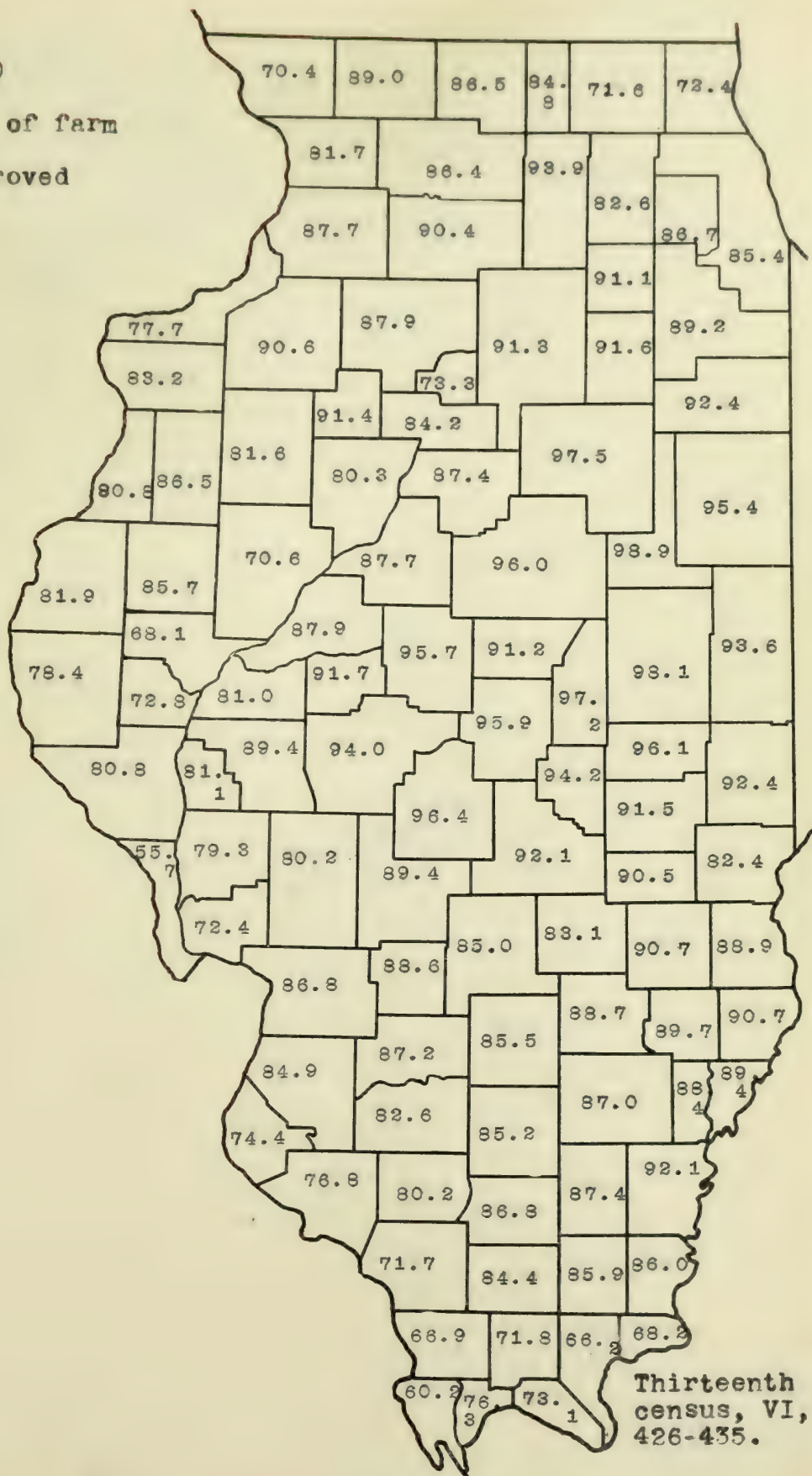
The state,
82.5



LIBRARY
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UNIVERSITY OF MICHIGAN

Percentage of farm
acreage improved

The state,
86.2



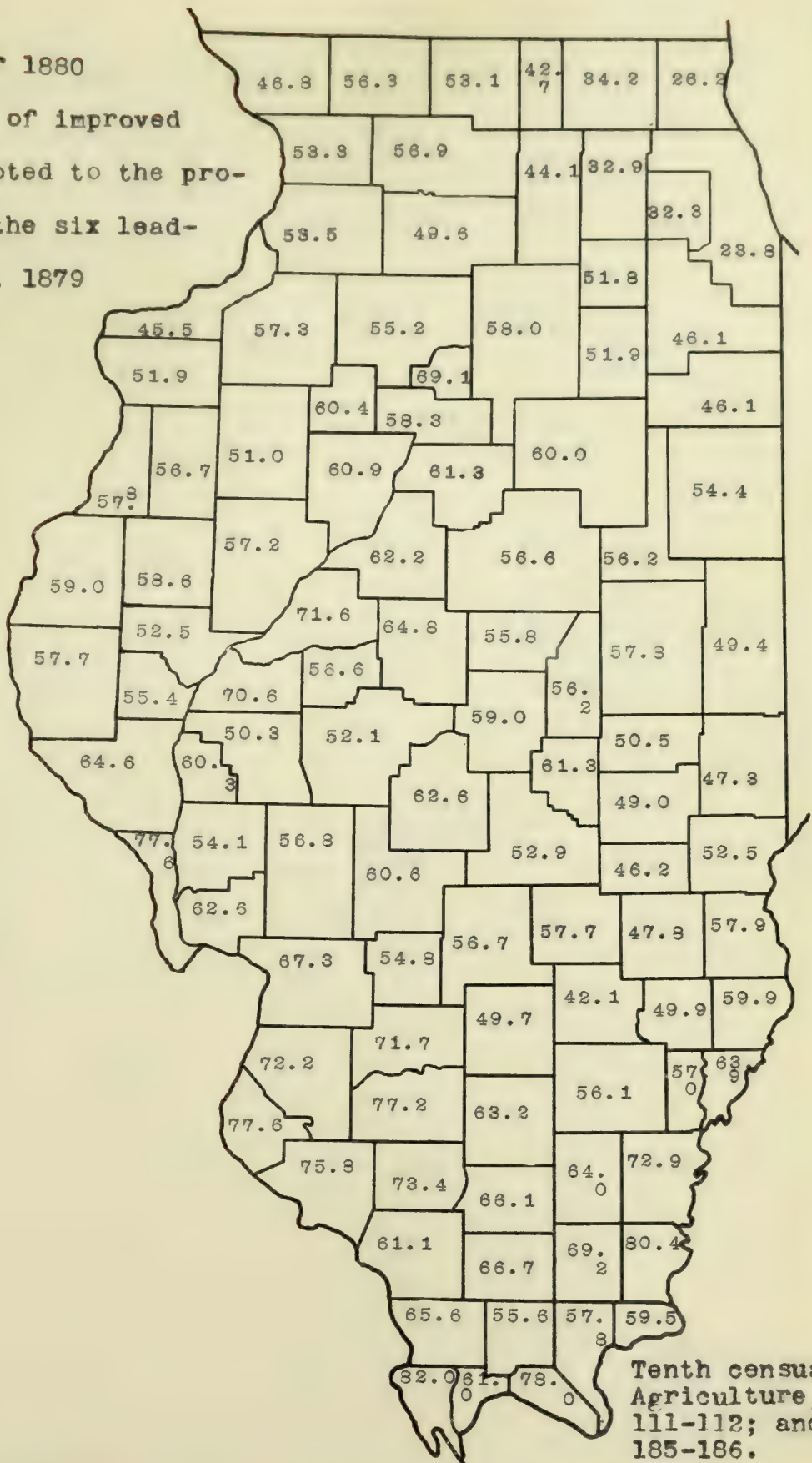
Thirteenth
census, VI,
426-435.

LIBRARY OF THE

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UNIVERSITY OF ALABAMA

Percentage of improved
acres devoted to the pro-
duction of the six lead-
ing cereals, 1879

The state,
55.4



Tenth census,
Agriculture,
111-112; and
185-186.



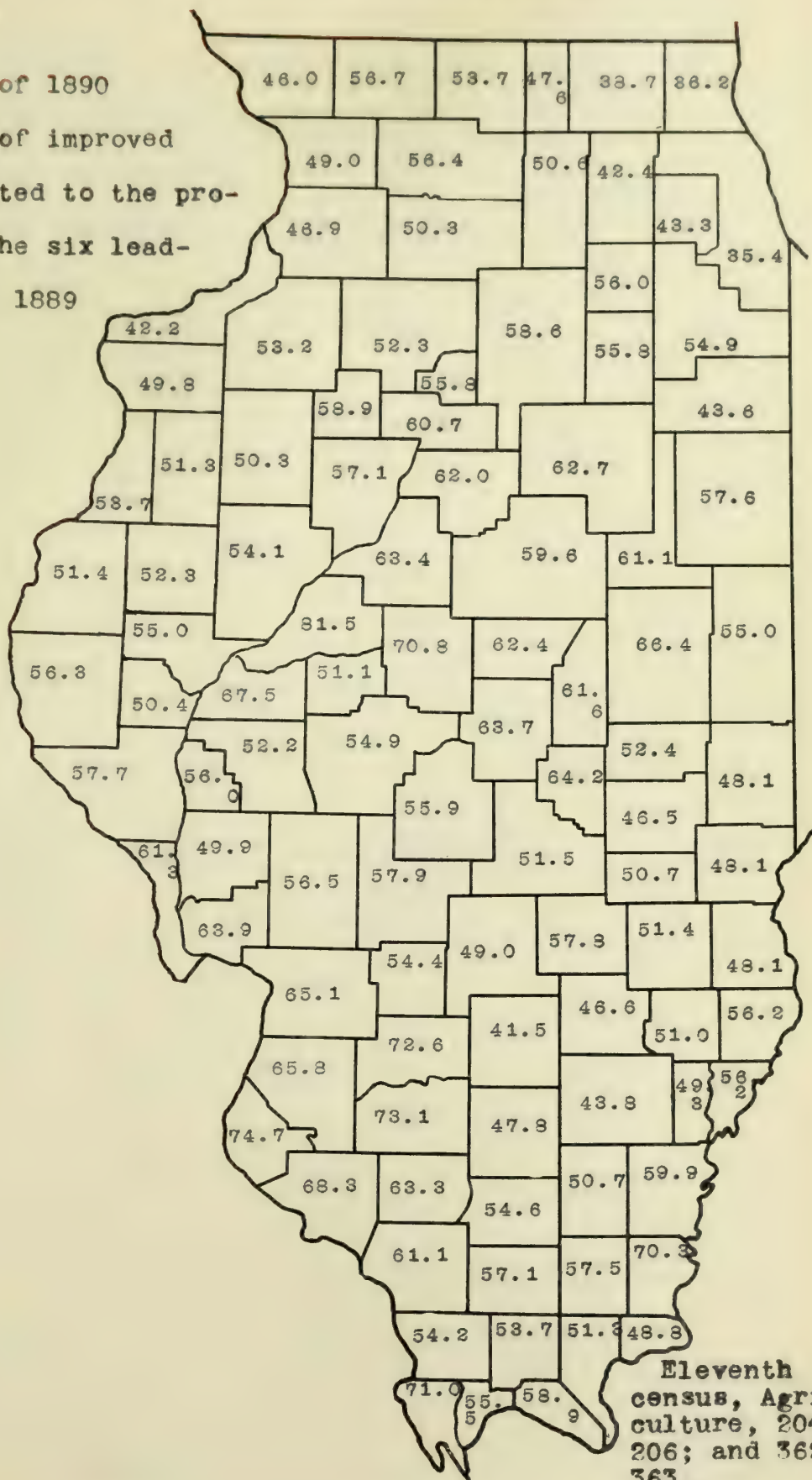
ILLINOIS

196.

Census of 1890

Percentage of improved
acres devoted to the pro-
duction of the six lead-
ing cereals, 1889

The state,
55.3



Map of the State of Ohio



Library
of the
University of
Cincinnati

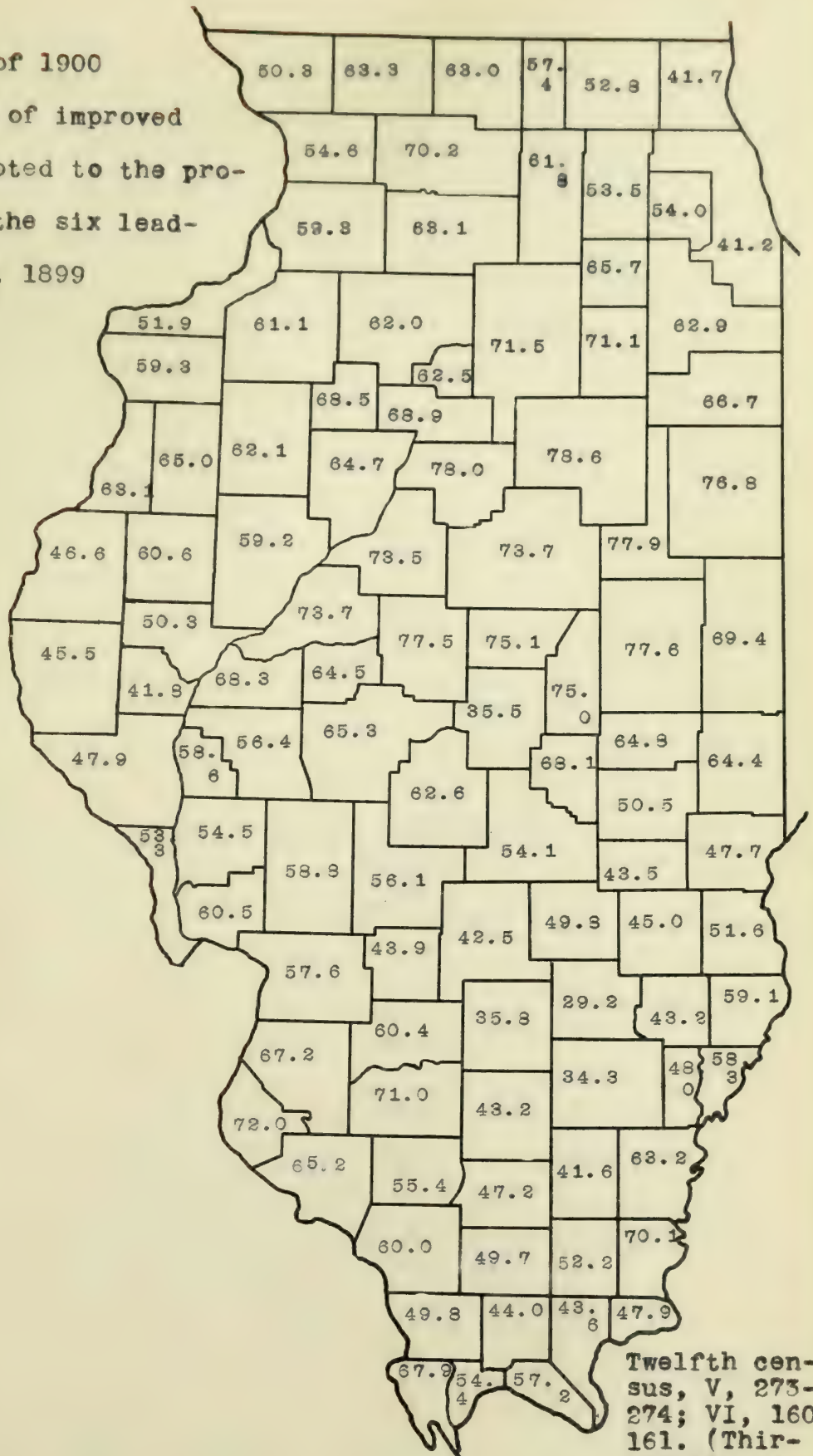
ILLINOIS

197.

Census of 1900

Percentage of improved
acreage devoted to the pro-
duction of the six lead-
ing cereals, 1899

The state,
60.5



Twelfth cen-
sus, V, 273-
274; VI, 160-
161. (Thir-
teenth, VI,
426-435.)

Library
of the
UNIVERSITY OF S. AUST.

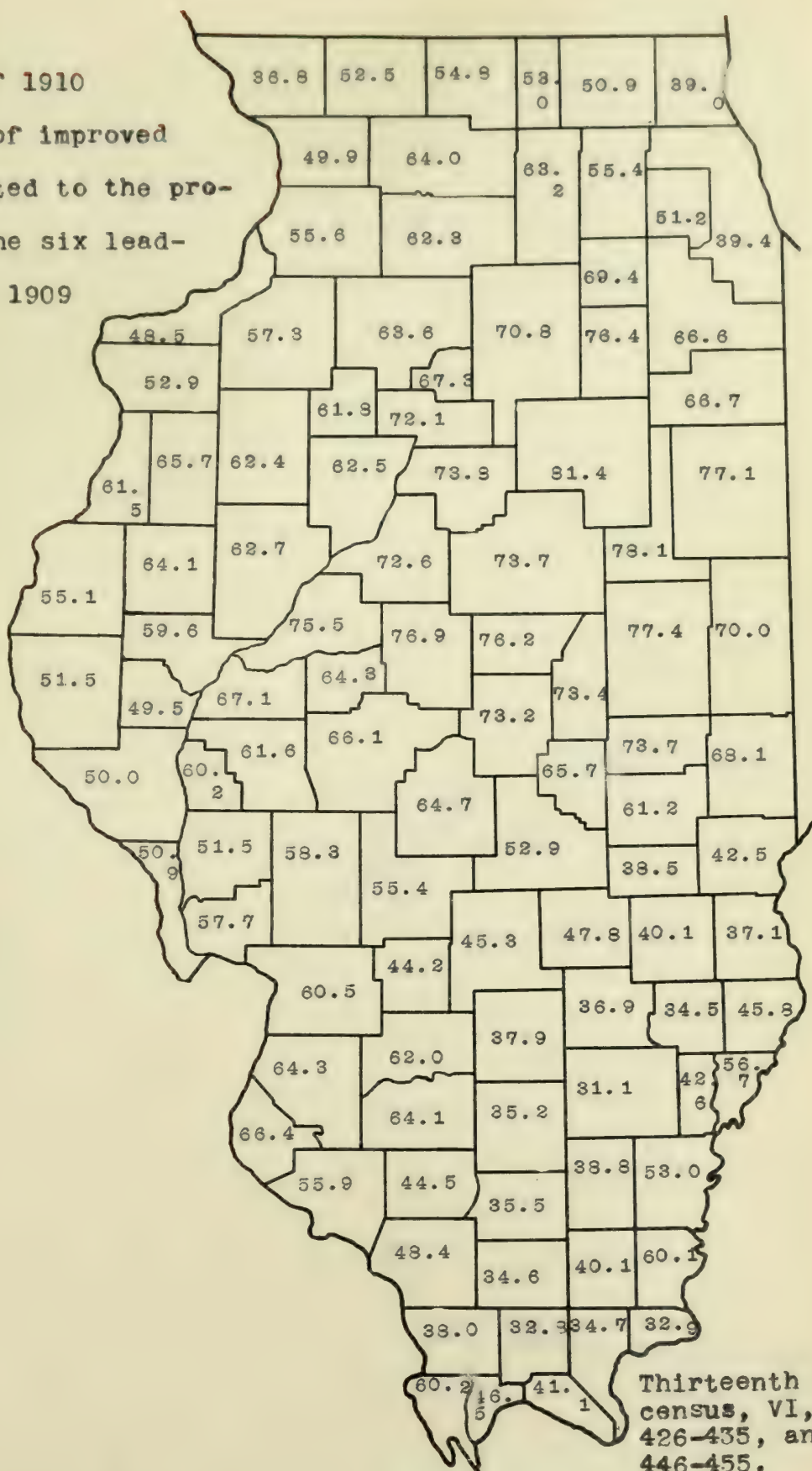
ILLINOIS

Census of 1910

Percentage of improved
acreage devoted to the pro-
duction of the six lead-
ing cereals, 1909

The state,

59.0



Thirteenth
census, VI,
426-435, and
446-455.

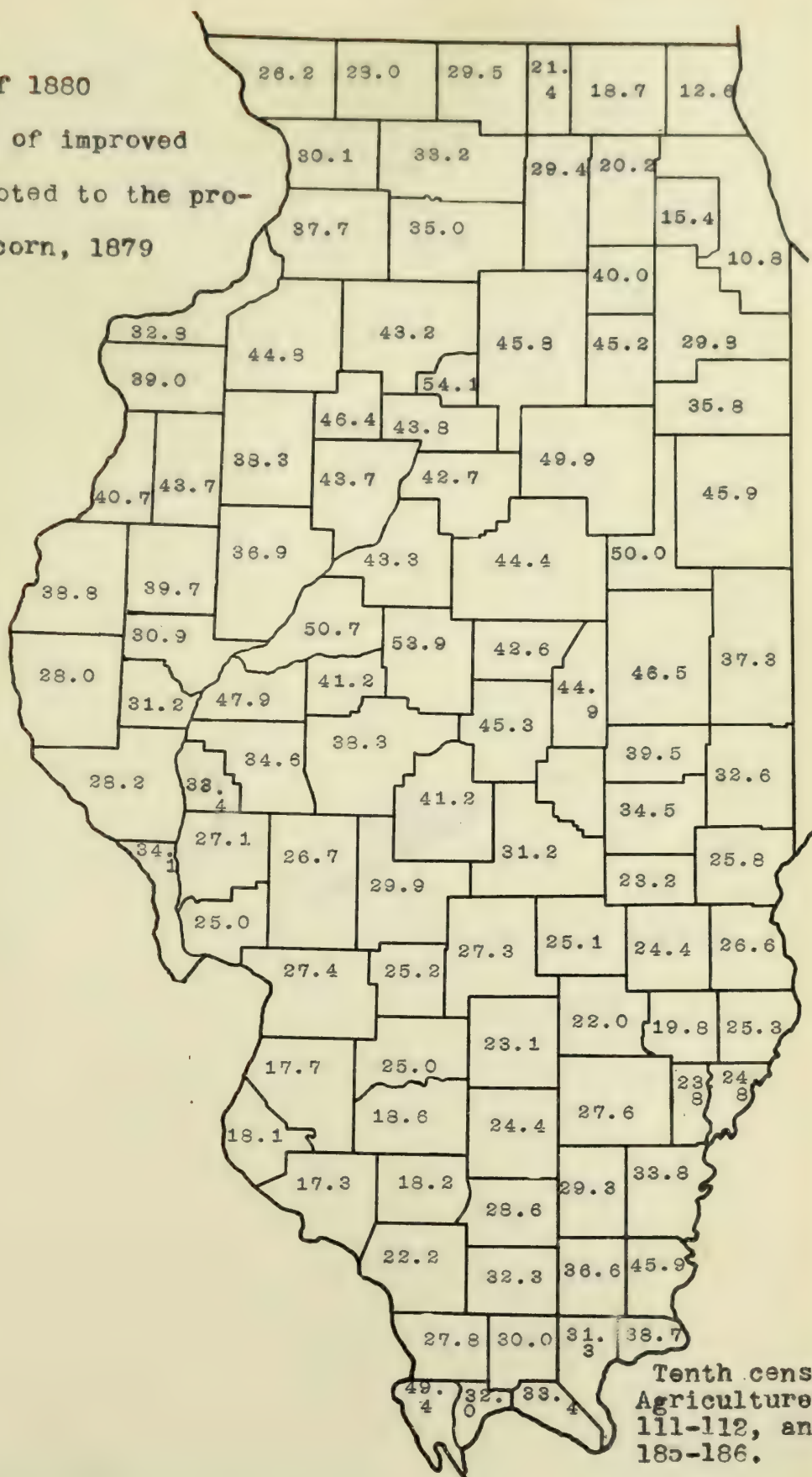
Library of the
University of London

ILLINOIS

Census of 1880

Percentage of improved
acreage devoted to the pro-
duction of corn, 1879

The state,
34.5



Tenth census
Agriculture,
111-112, and
185-186.

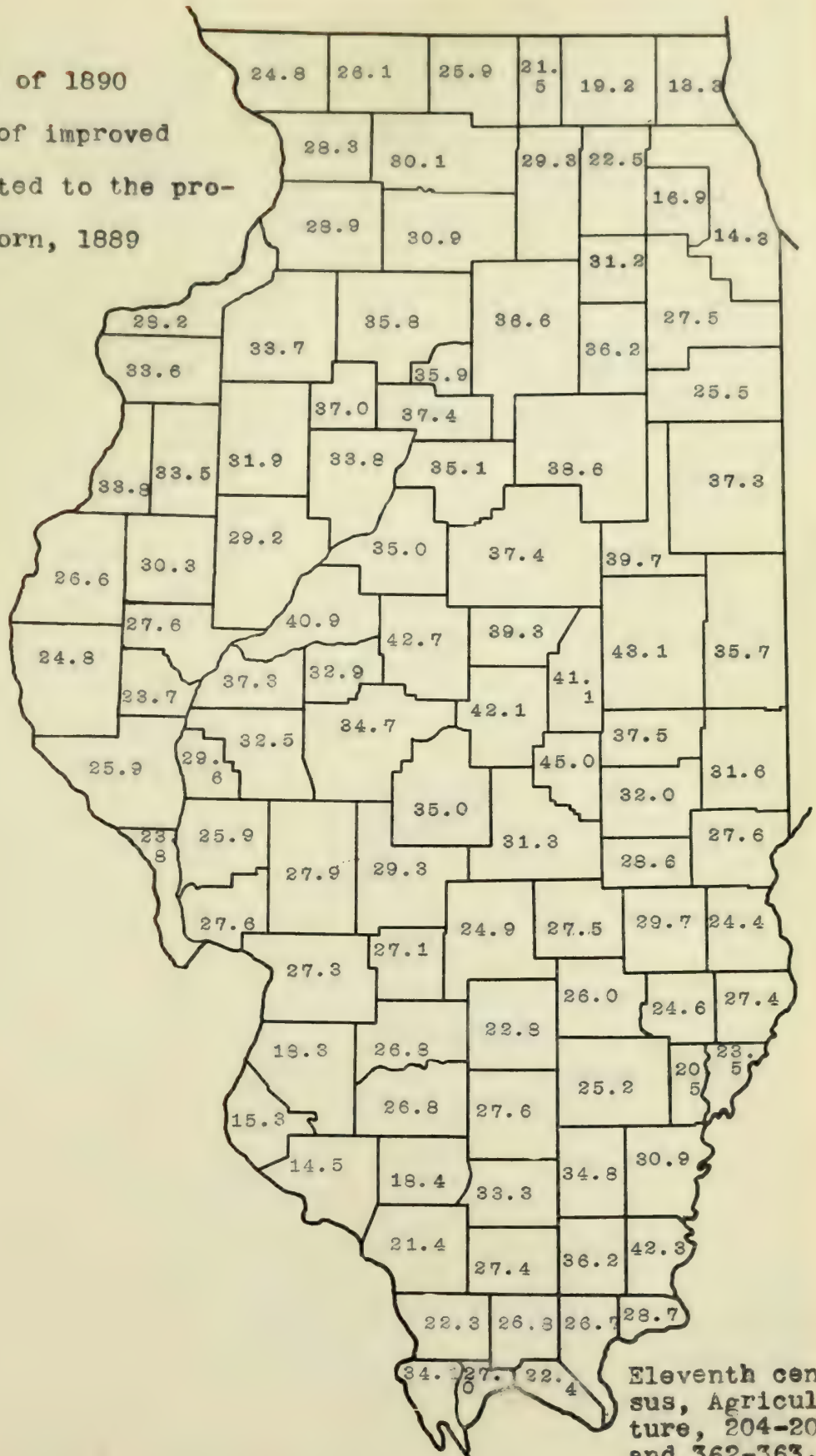
LIBRARY
OF THE
UNIVERSITY OF TORONTO

ILLINOIS

Census of 1890

Percentage of improved
acreage devoted to the pro-
duction of corn, 1889

The state,
30.6



Eleventh cen-
sus, Agricul-
ture, 204-206,
and 362-363.

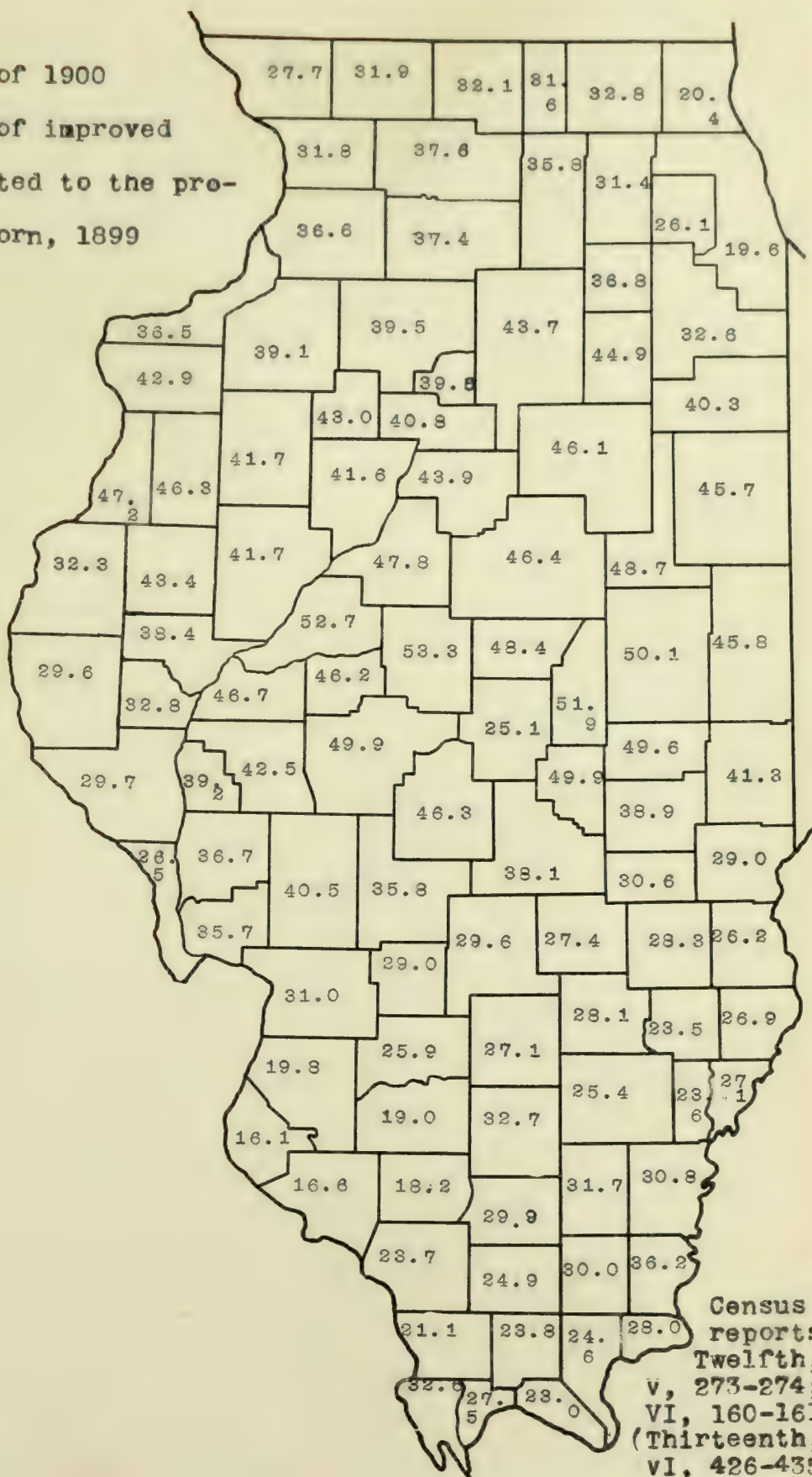
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ILLINOIS

Census of 1900

Percentage of improved
acreaage devoted to the pro-
duction of corn, 1899

The state,
37.1



Census
reports:
Twelfth,
v, 273-274;
VI, 160-161.
(Thirteenth,
VI, 426-435.)

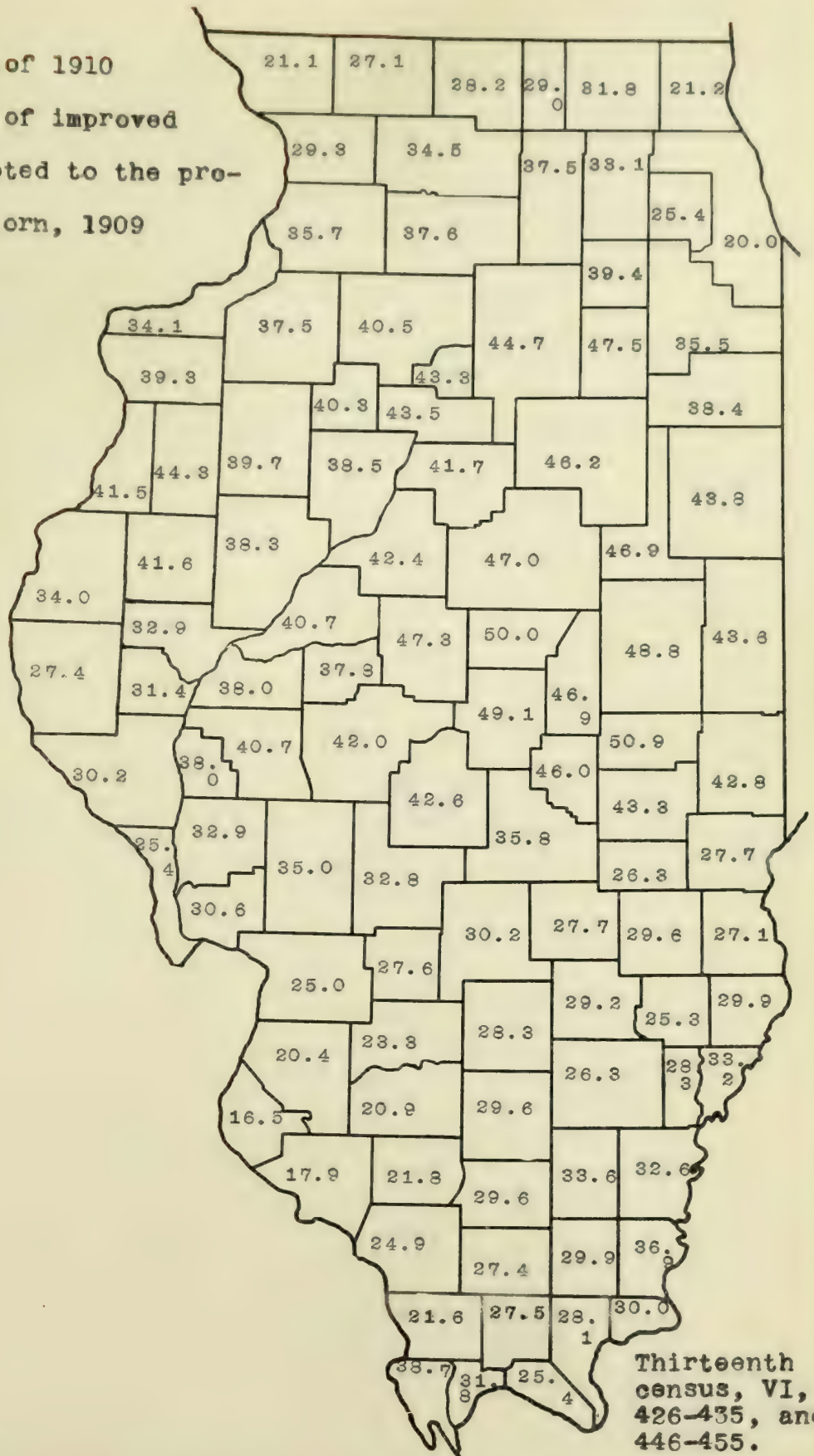
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OF THE
UNIVERSITY OF CALIFORNIA

ILLINOIS

202.

Census of 1910
Percentage of improved
acreage devoted to the pro-
duction of corn, 1909

The state,
35.8



Thirteenth
census, VI,
426-435, and
446-455.

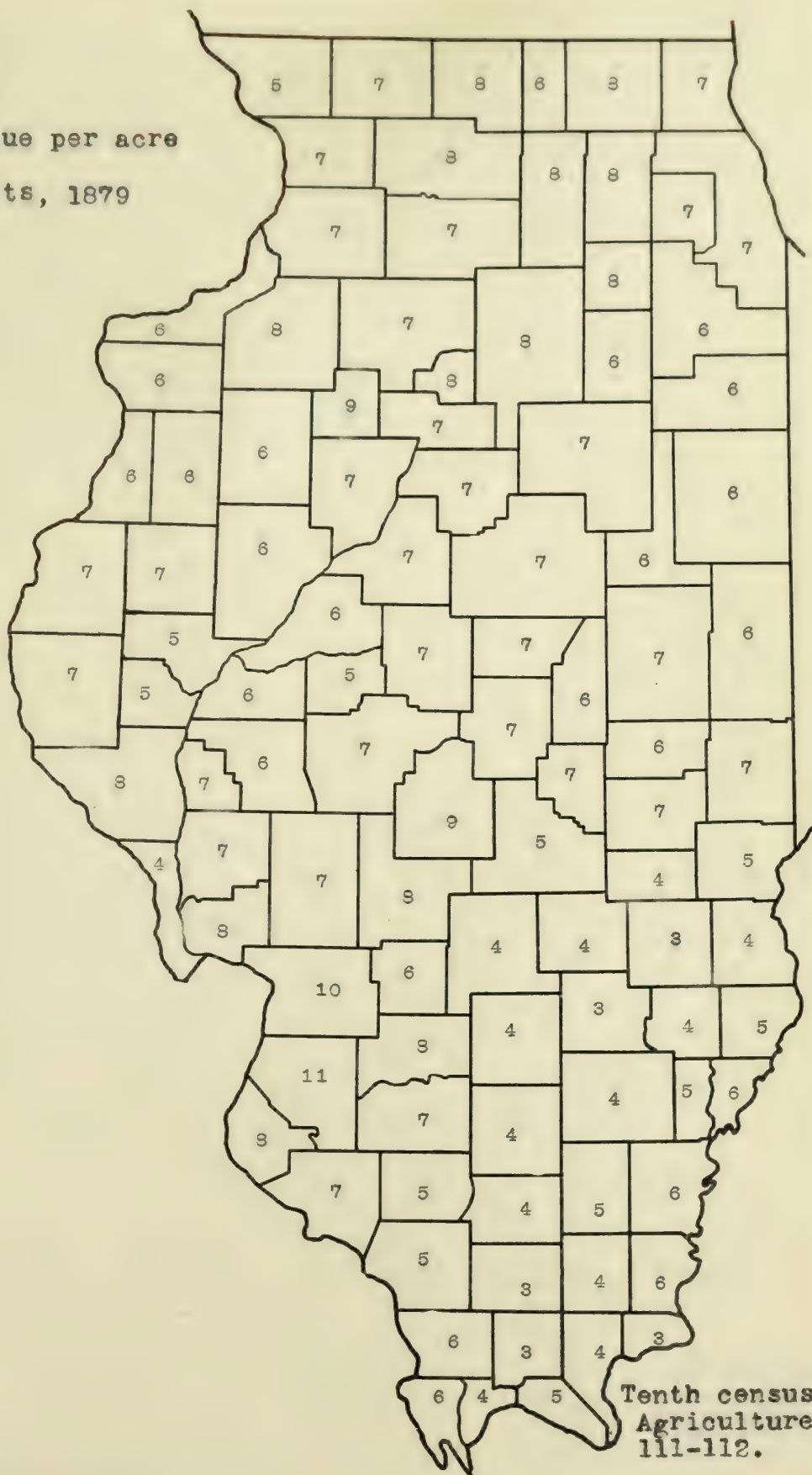
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ILLINOIS

1880

Average value per acre
of products, 1879

The state,
\$6.43



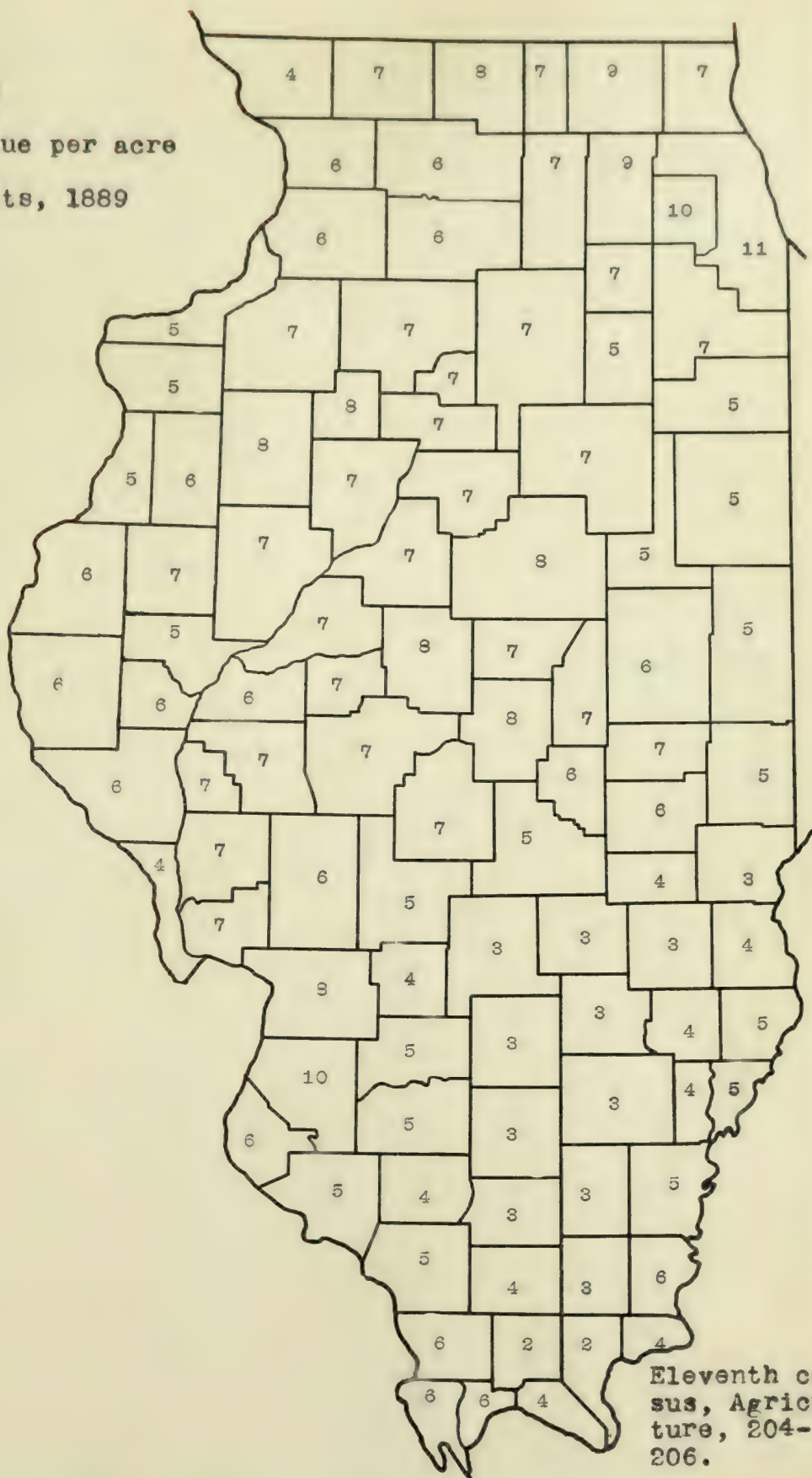
Tenth census,
Agriculture,
111-112.

ILLINOIS

1890

Average value per acre
of products, 1889

The state,
\$6.06



Eleventh cen-
sus, Agricul-
ture, 204-
206.

THE
AMERICAN
GEOGRAPHICAL SOCIETY

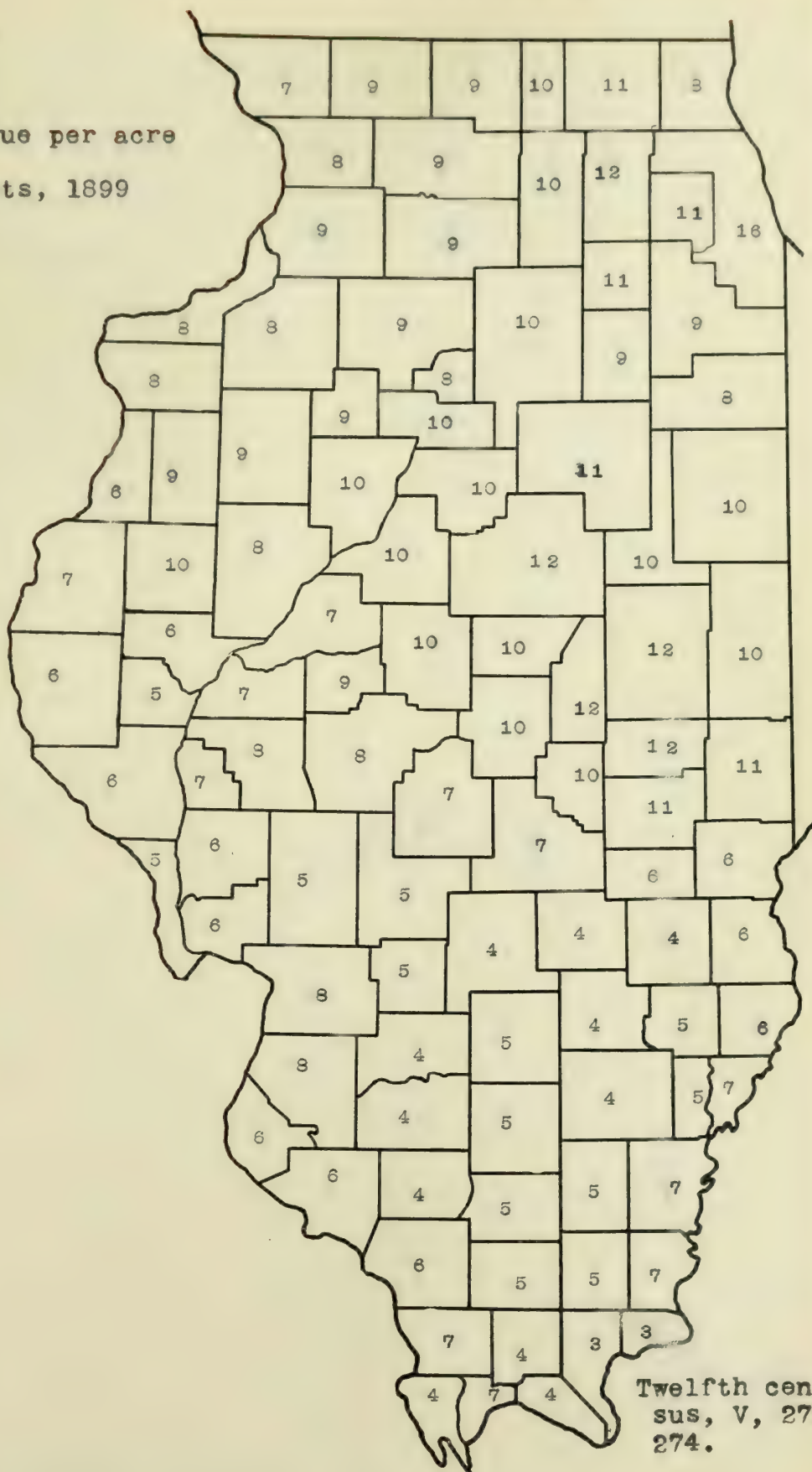
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OF THE
AMERICAN
GEOGRAPHICAL SOCIETY

ILLINOIS

1900

Average value per acre
of products, 1899

The state,
\$8.02



Twelfth cen-
sus, V, 273-
274.

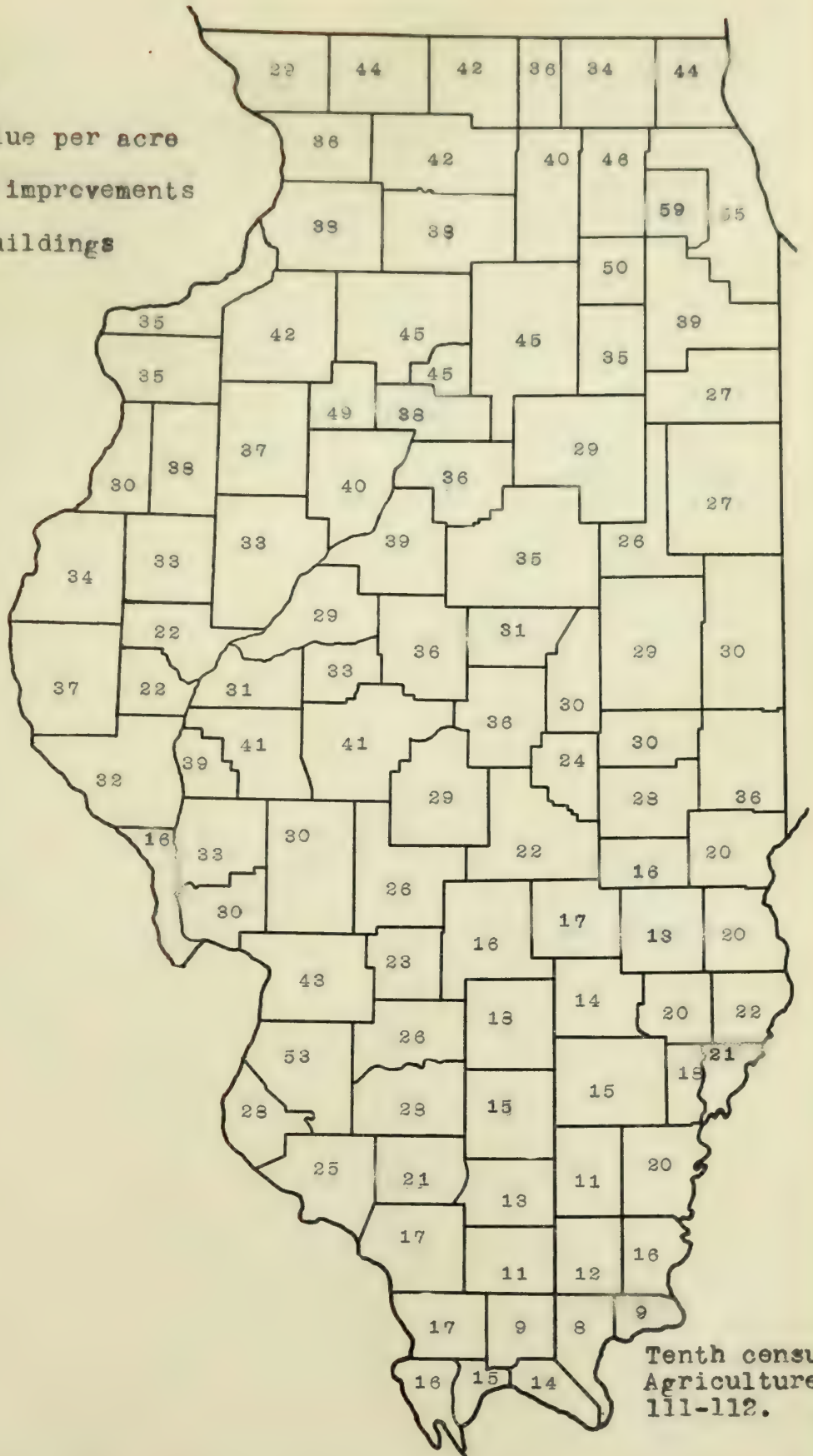
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UNIVERSITY OF GLASGOW

ILLINOIS

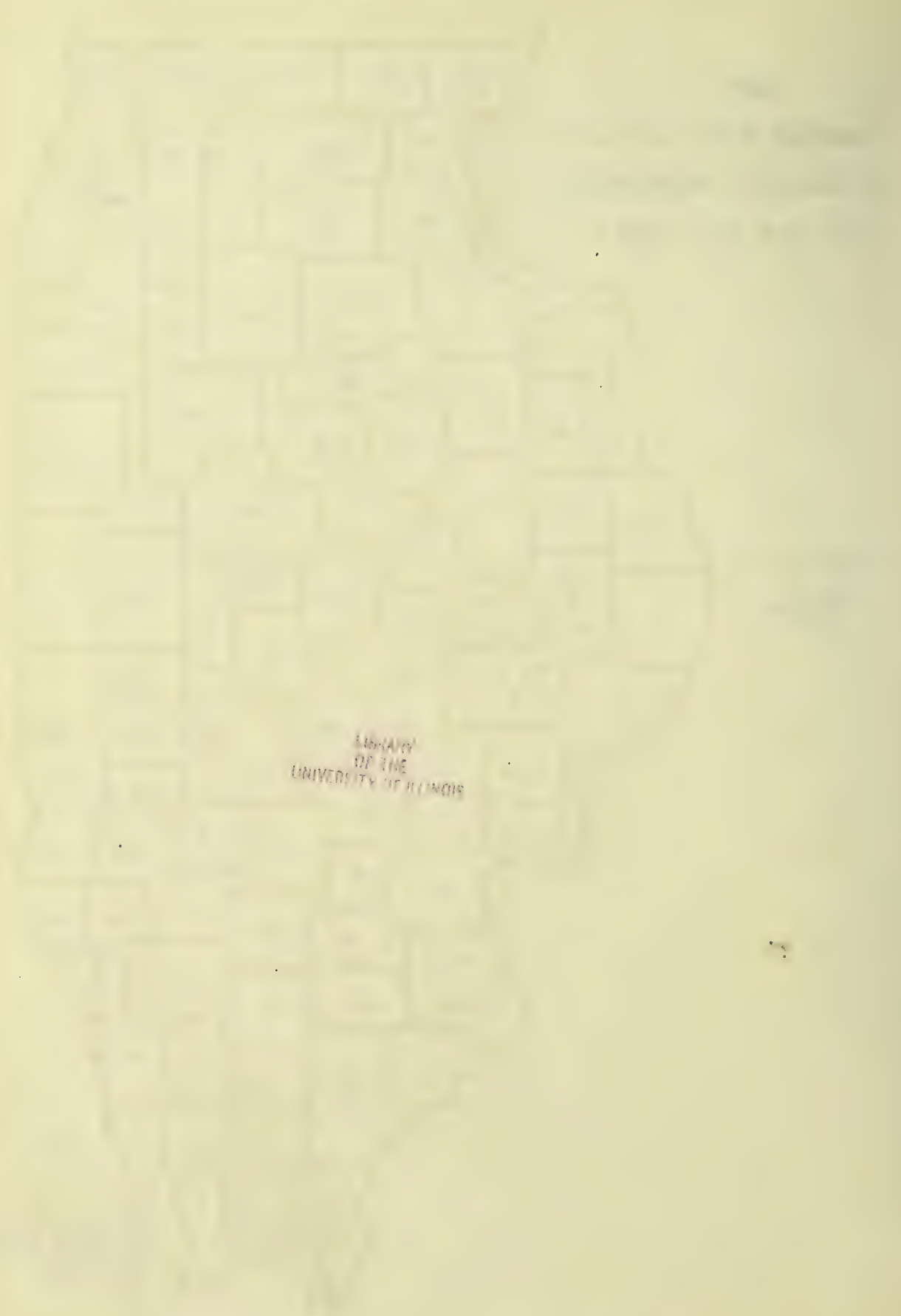
1880

Average value per acre
of land and improvements
including buildings

The state,
\$31.87



Tenth census
Agriculture,
111-112.



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207.

Average value per acre
of land and improvements
including buildings

Value per acre of improvements on buildings

Eleventh census, Agriculture, 206.

Eleventh cen-
sus, Agri-
culture, 204-
206.

THE
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D. C.

LANDS
OF THE
UNITED STATES

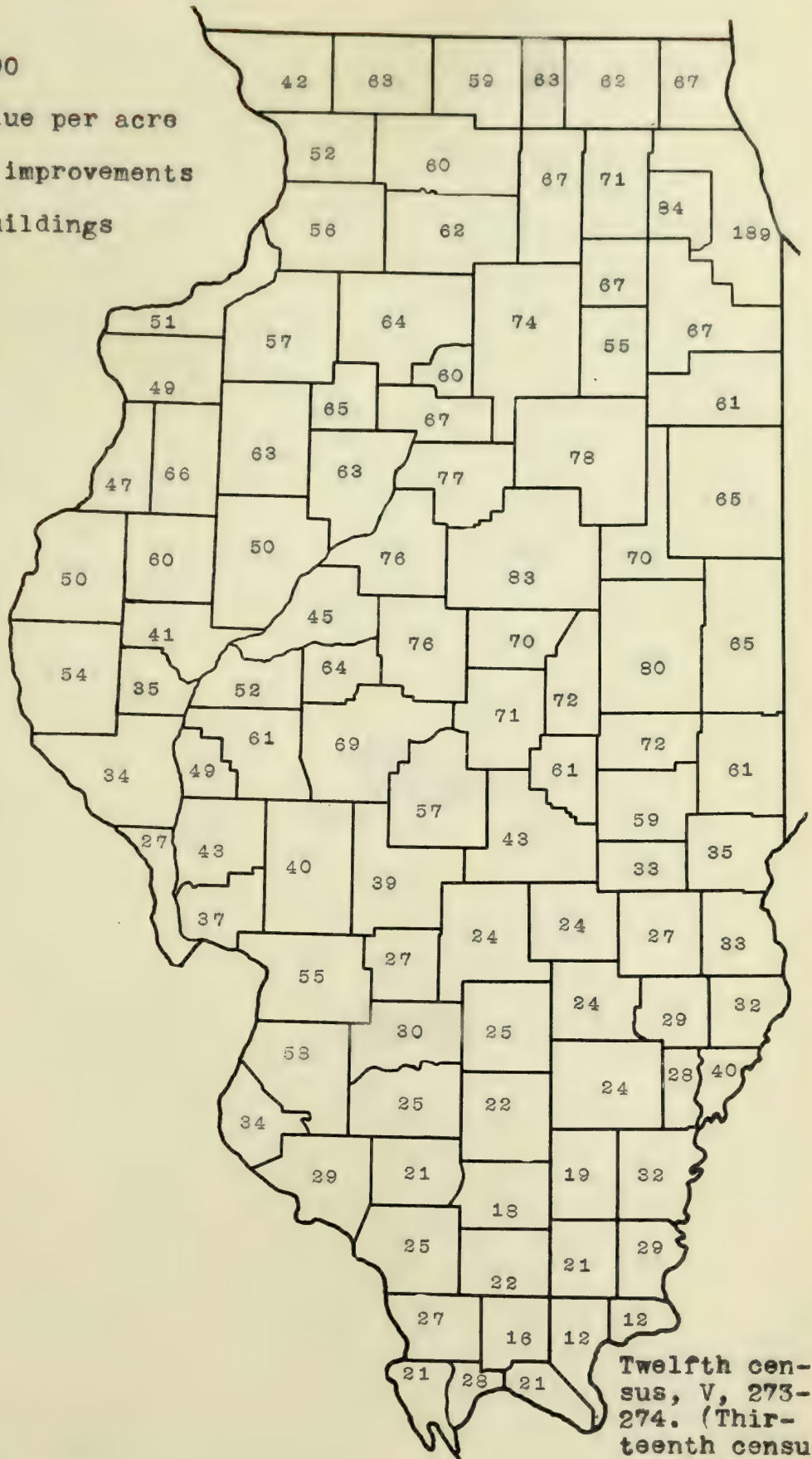
ILLINOIS

208.

1900

Average value per acre
of land and improvements
including buildings

The state,
\$53.84



Twelfth cen-
sus, V, 273-
274. (Thir-
teenth census,
VI, 426-435.)

MISSISSIPPI



THE
MISSISSIPPI
LEGISLATURE
HAS
APPROVED
AND
THE GOVERNOR
HAS SIGNED

LIBRARY
OF THE
HOUSE OF REPRESENTATIVES
OF THE STATE OF MISSISSIPPI

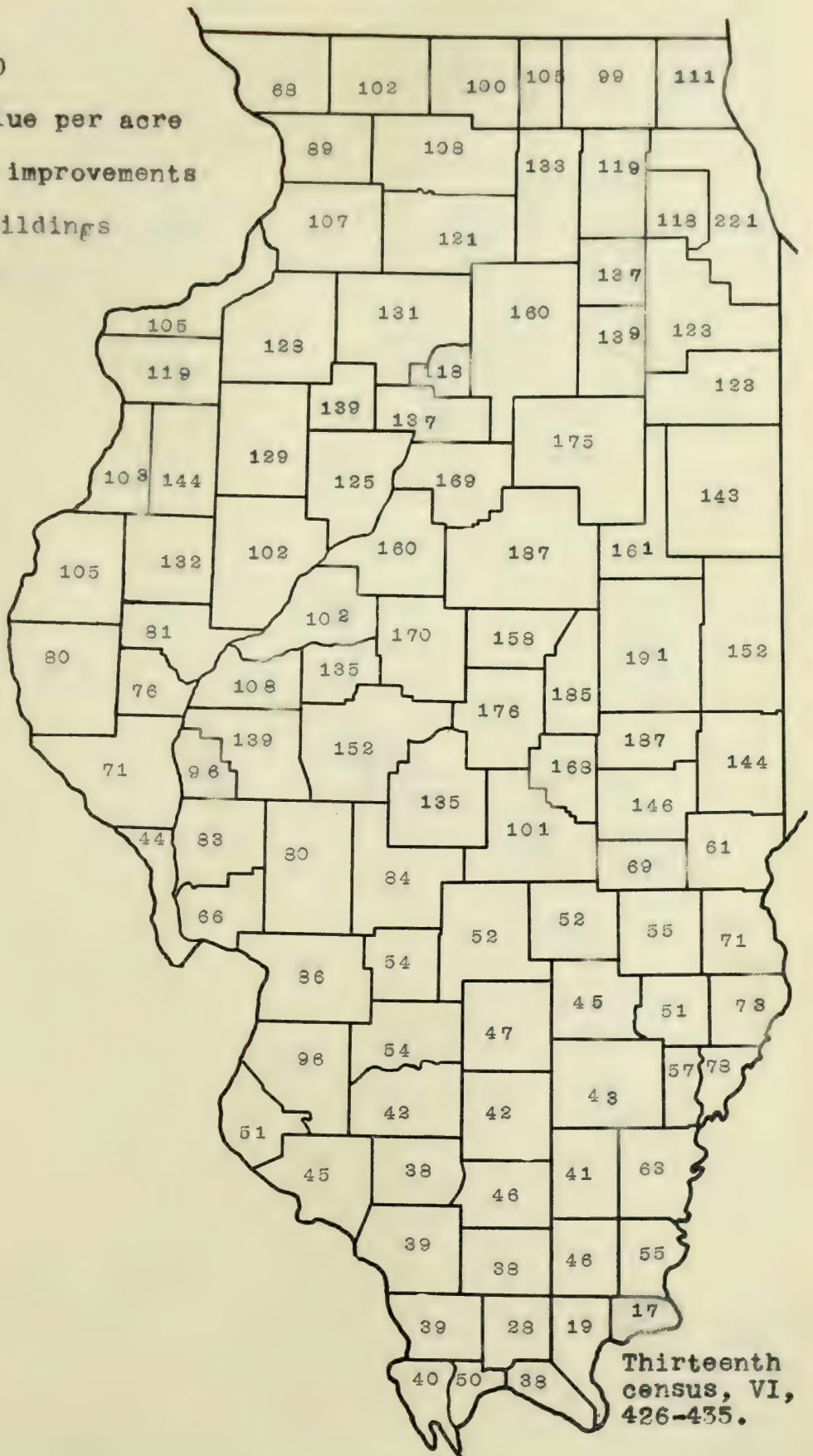
ILLINOIS

209.

1910

Average value per acre
of land and improvements
including buildings

The state,
\$108.32



Thirteenth
census, VI,
426-435.

1897

THE UNIVERSITY OF CHICAGO
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OF THE
UNIVERSITY OF CHICAGO

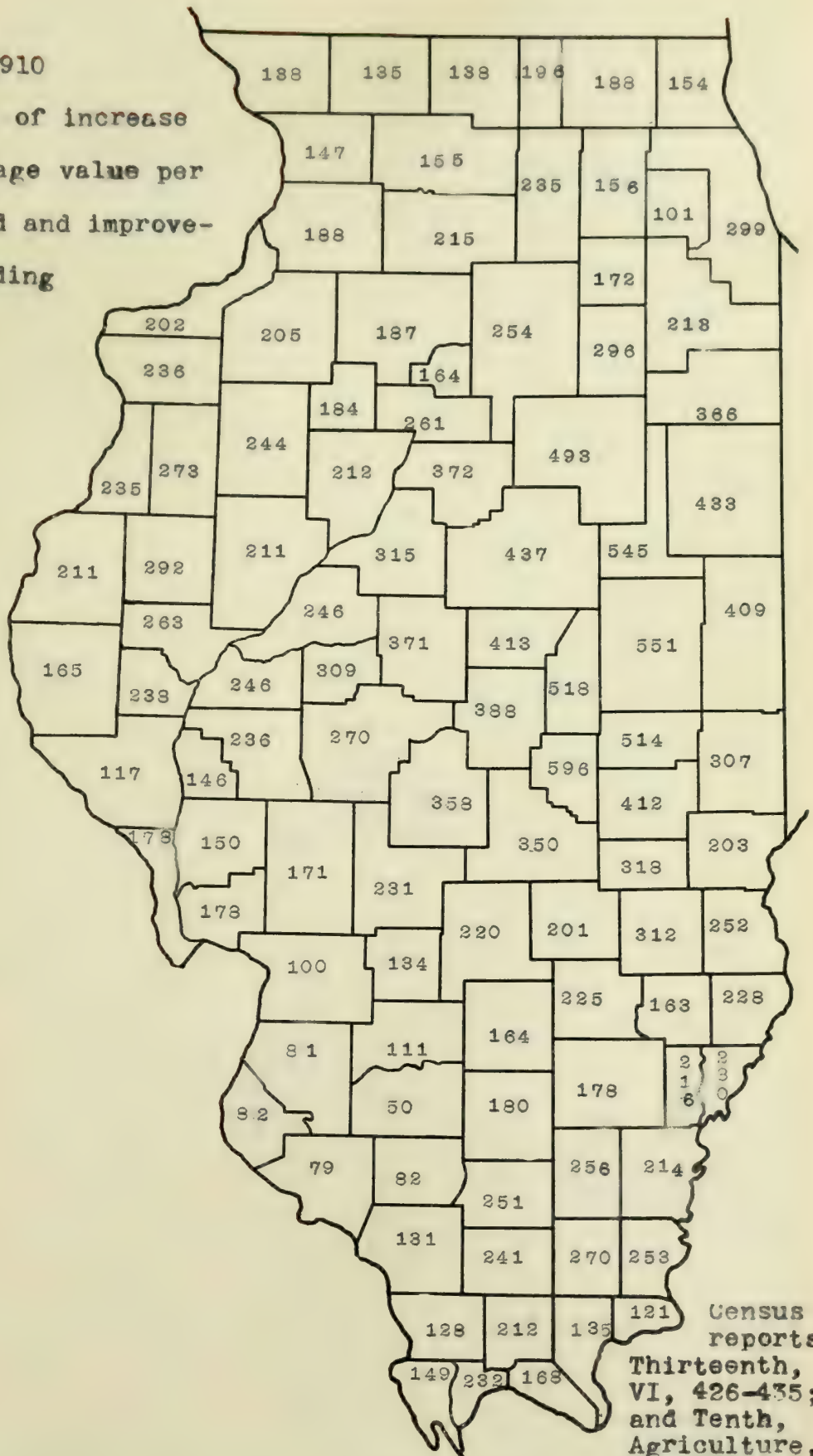
ILLINOIS

210.

1880-1910

Percentage of increase
in the average value per
acre of land and improve-
ments including
buildings

The state,
241.8



Census
reports:
Thirteenth,
VI, 426-435;
and Tenth,
Agriculture,
111-112.

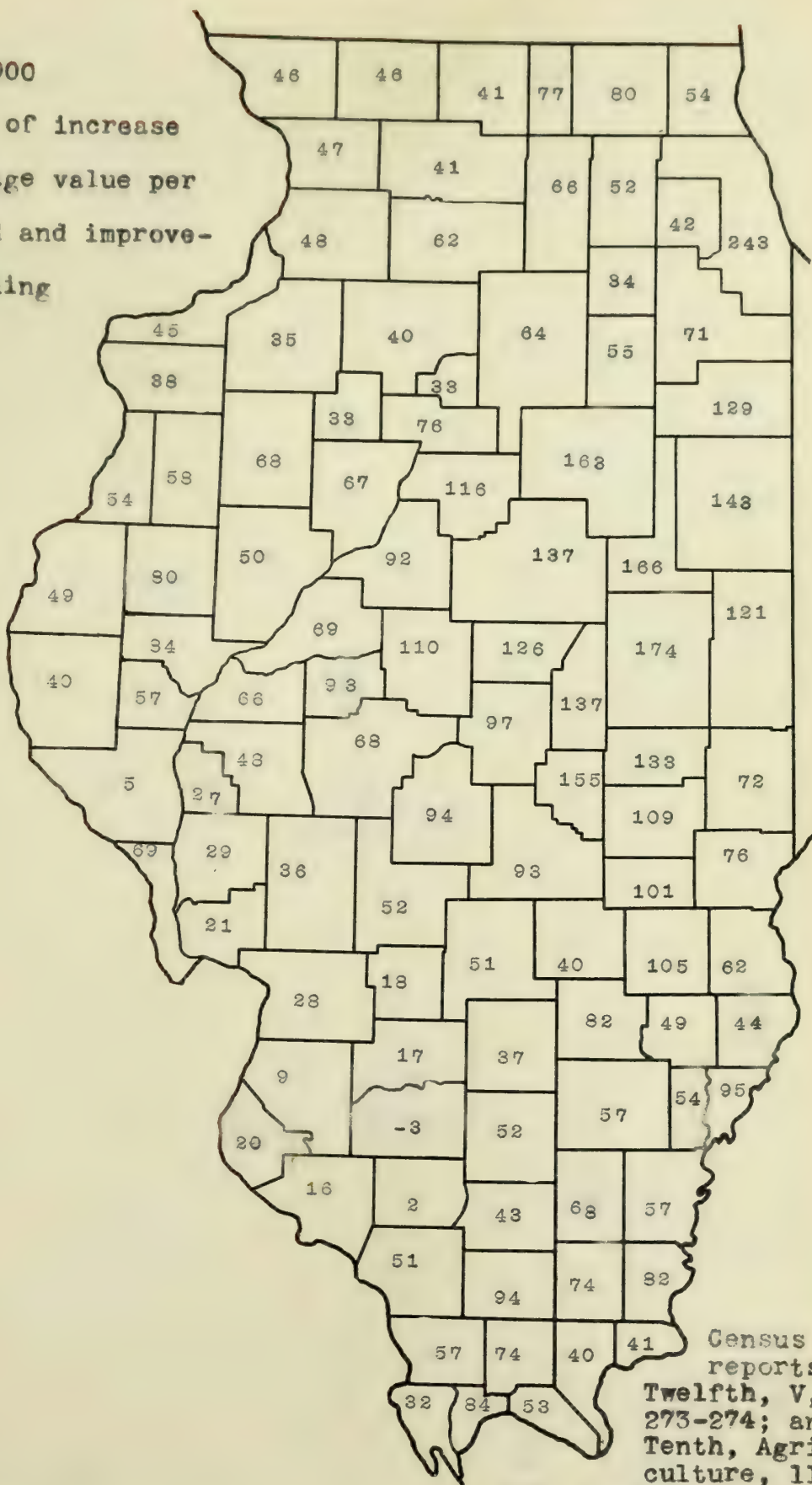
MAP 1



211.

Percentage of increase
in the average value per
acre of land and improve-
ments including
buildings

The state,
68.9



Census reports:
Twelfth, V, 273-274; and Tenth, Agriculture, 111-112. (Thir. VI, 426-35)

Map of Illinois

Scale of Miles
0 10 20 30 40 50
Scale of Feet
0 1000 2000 3000 4000 5000
Scale of Nautical Miles
0 10 20 30 40 50

UNIVERSITY OF ILLINOIS
LIBRARY
ST. LOUIS

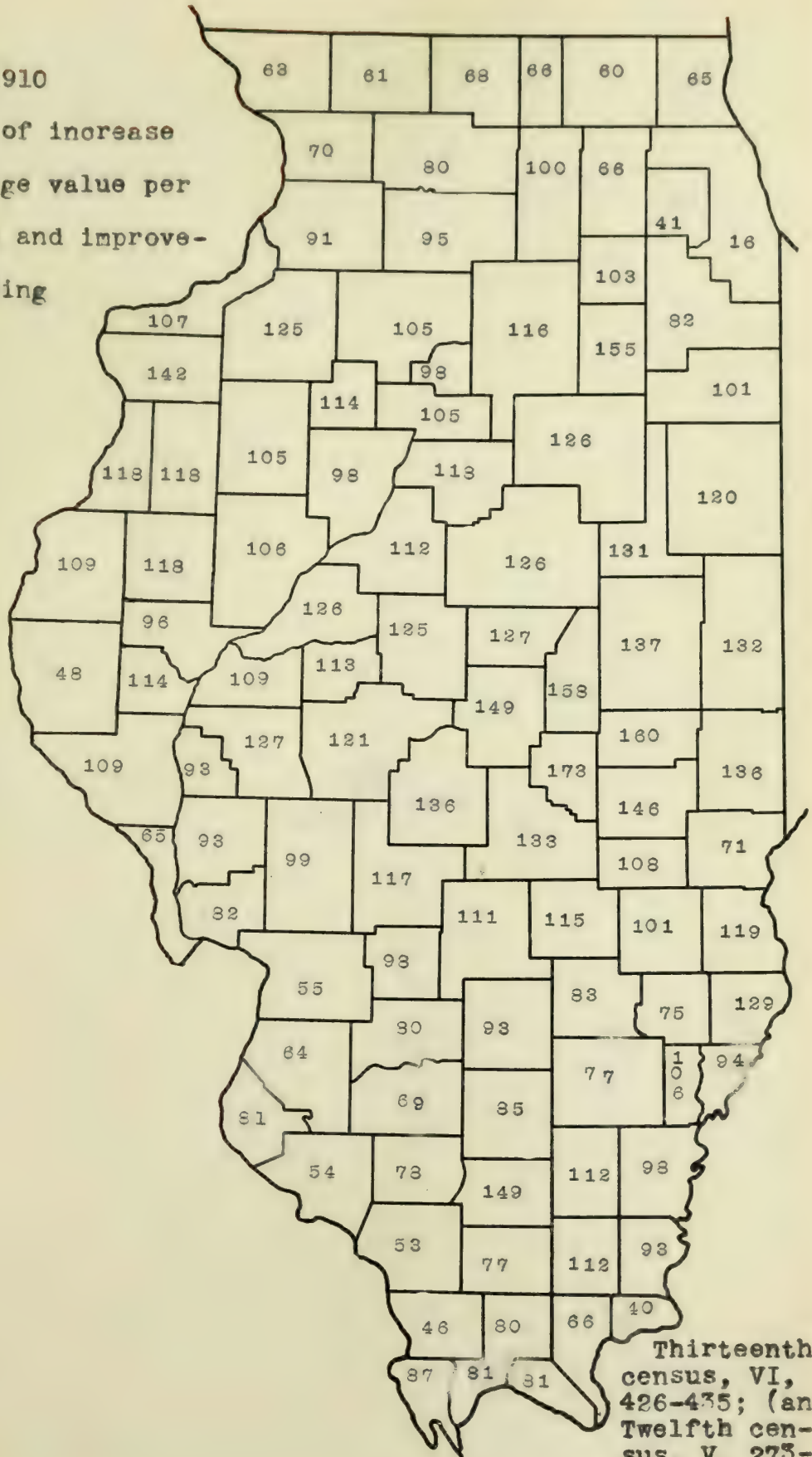
ILLINOIS

212.

1900-1910

Percentage of increase
in the average value per
acre of land and improve-
ments including
buildings

The state,
101.2



Thirteenth
census, VI,
426-435; (and
Twelfth cen-
sus, V, 273-
274.

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OF THE
UNIVERSITY OF MICHIGAN

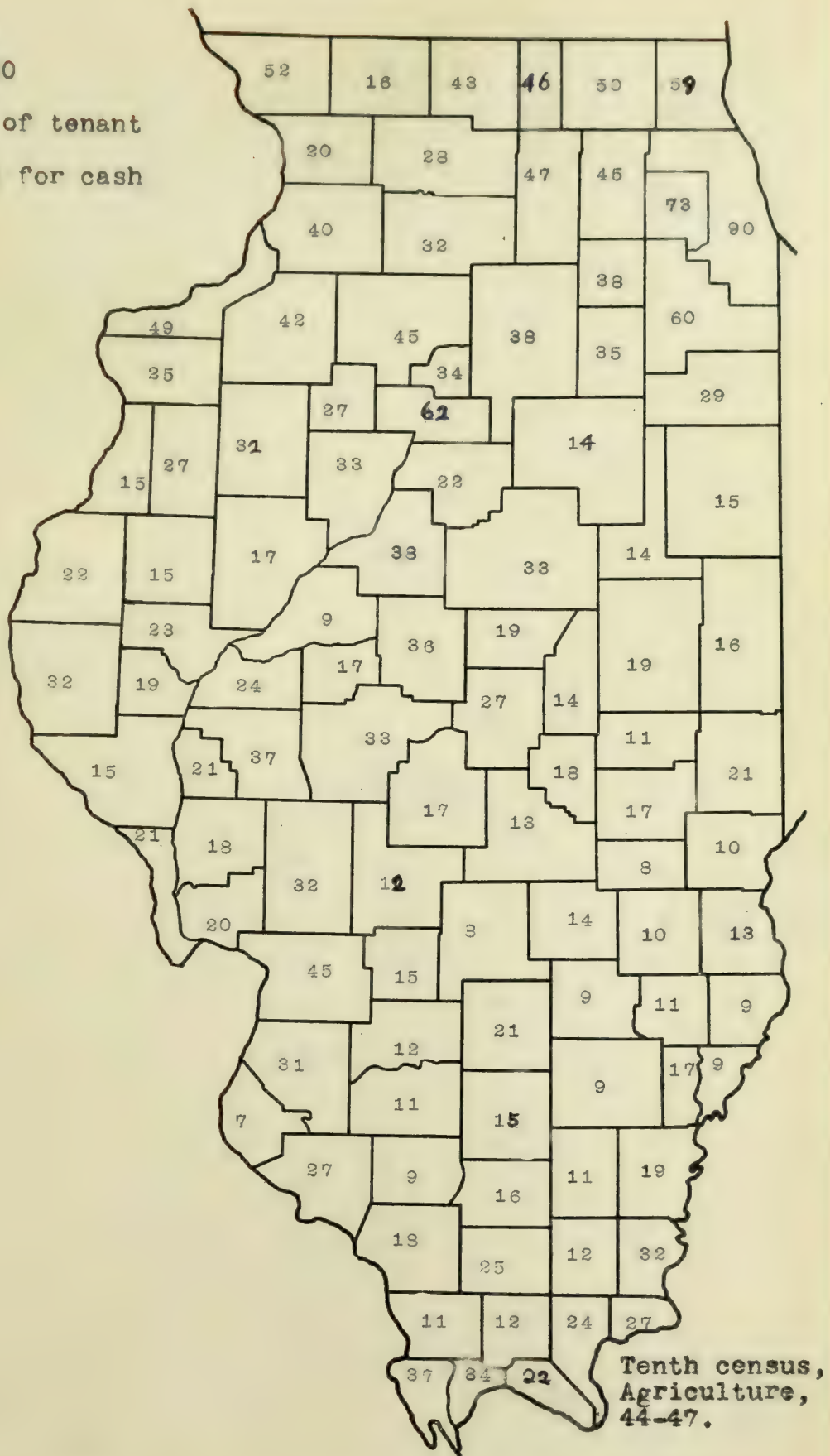
ILLINOIS

213.

1880

Percentage of tenant
farms rented for cash

The state,
25.7



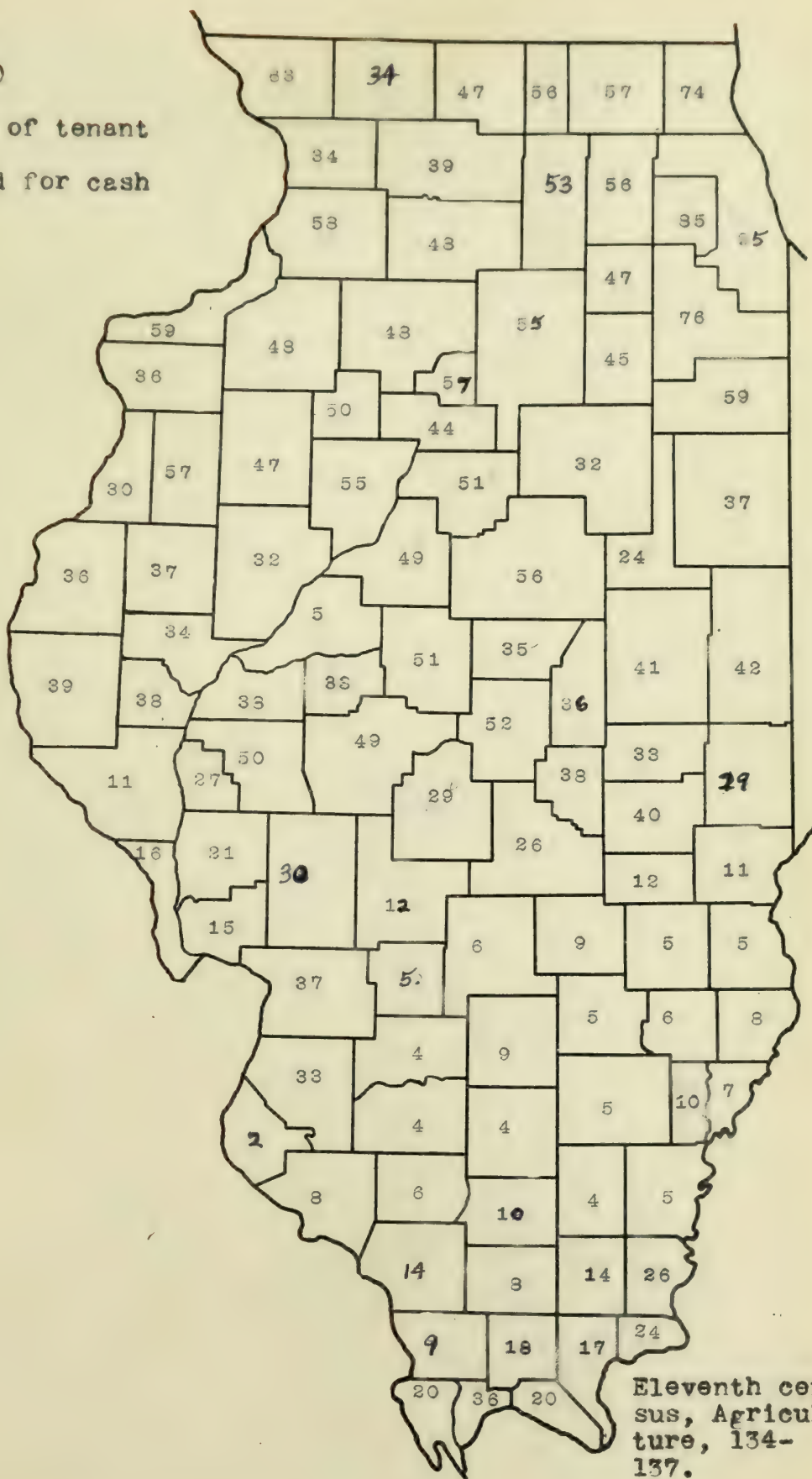
1887

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1890

Percentage of tenant
farms rented for cash

The state,
35.7



Eleventh cen-
sus, Agricul-
ture, 134-
137.

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OF THE
UNIVERSITY OF
VIRGINIA

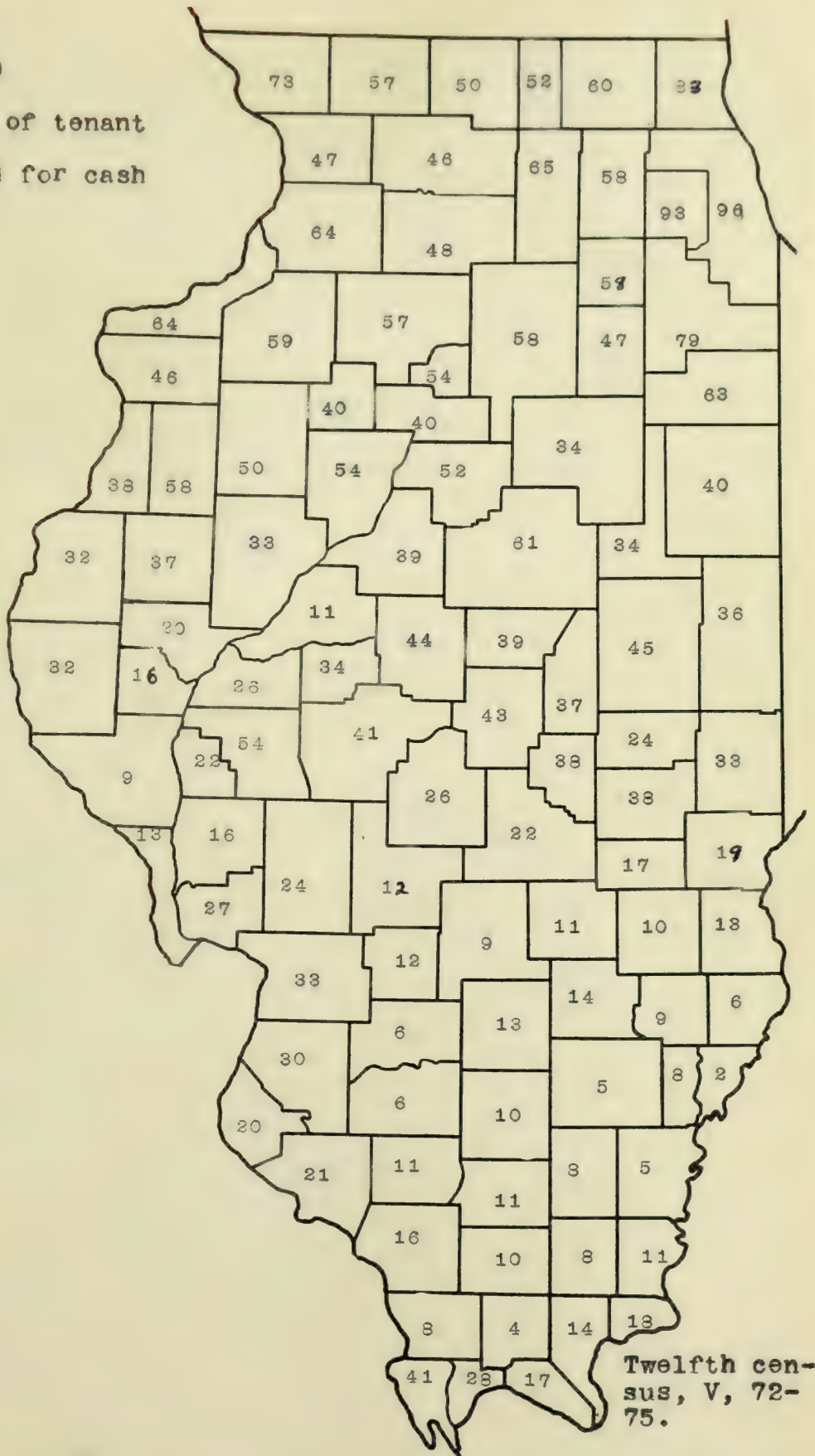
ILLINOIS

215.

1900

Percentage of tenant
farms rented for cash

The state,
36.8



Twelfth cen-
sus, V, 72-
75.

2011-10-10

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UNIVERSITY OF
TORONTO

ILLINOIS

216.

1910

Percentage of tenant
farms rented for cash

The state,
30.8





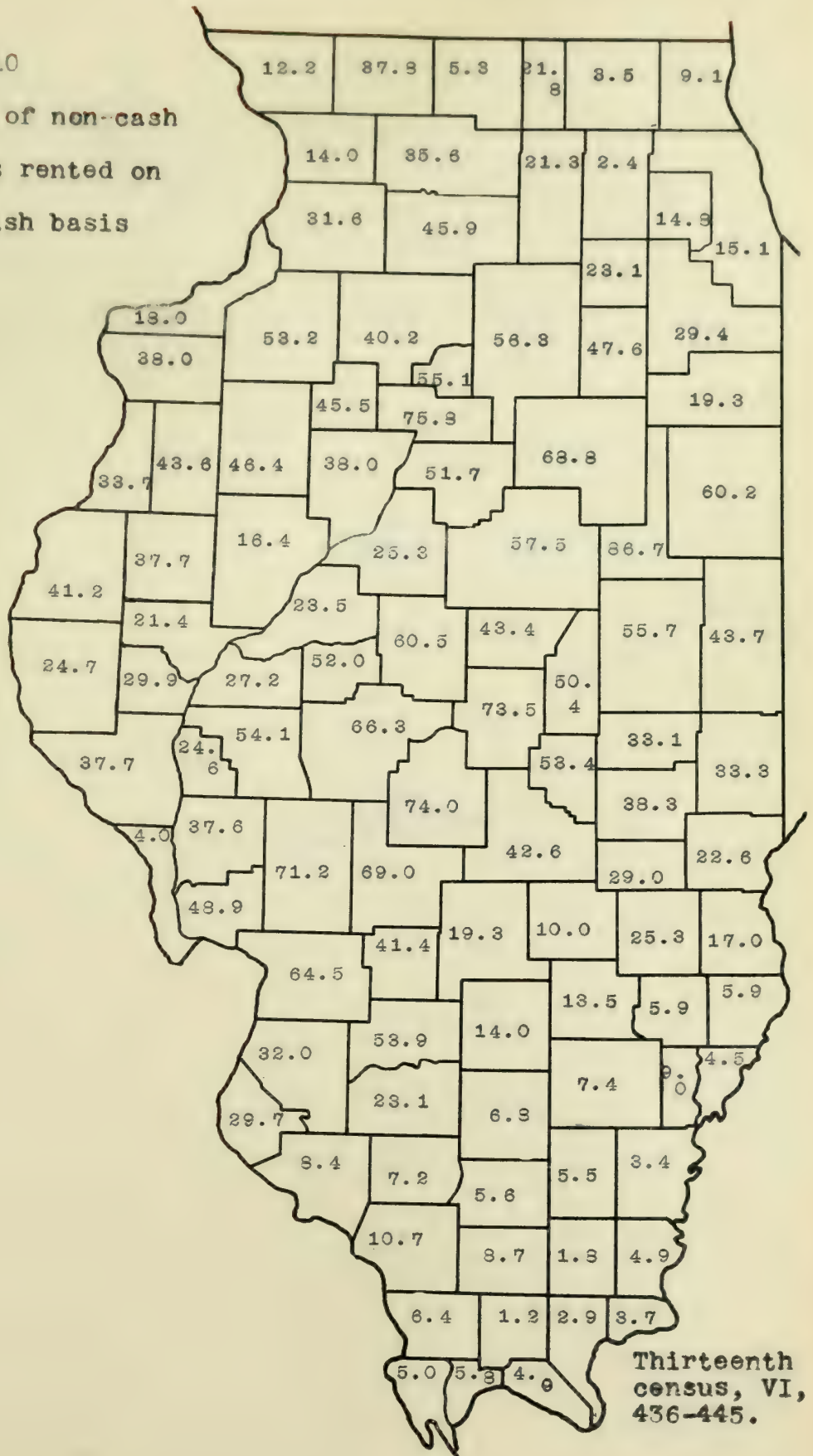
PROPERTY OF THE
LIBRARY OF THE
UNIVERSITY OF TORONTO

ILLINOIS

1910

Percentage of non-cash
rented farms rented on
the share-cash basis

The state,
35.5



Thirteenth
census, VI,
436-445.

1847

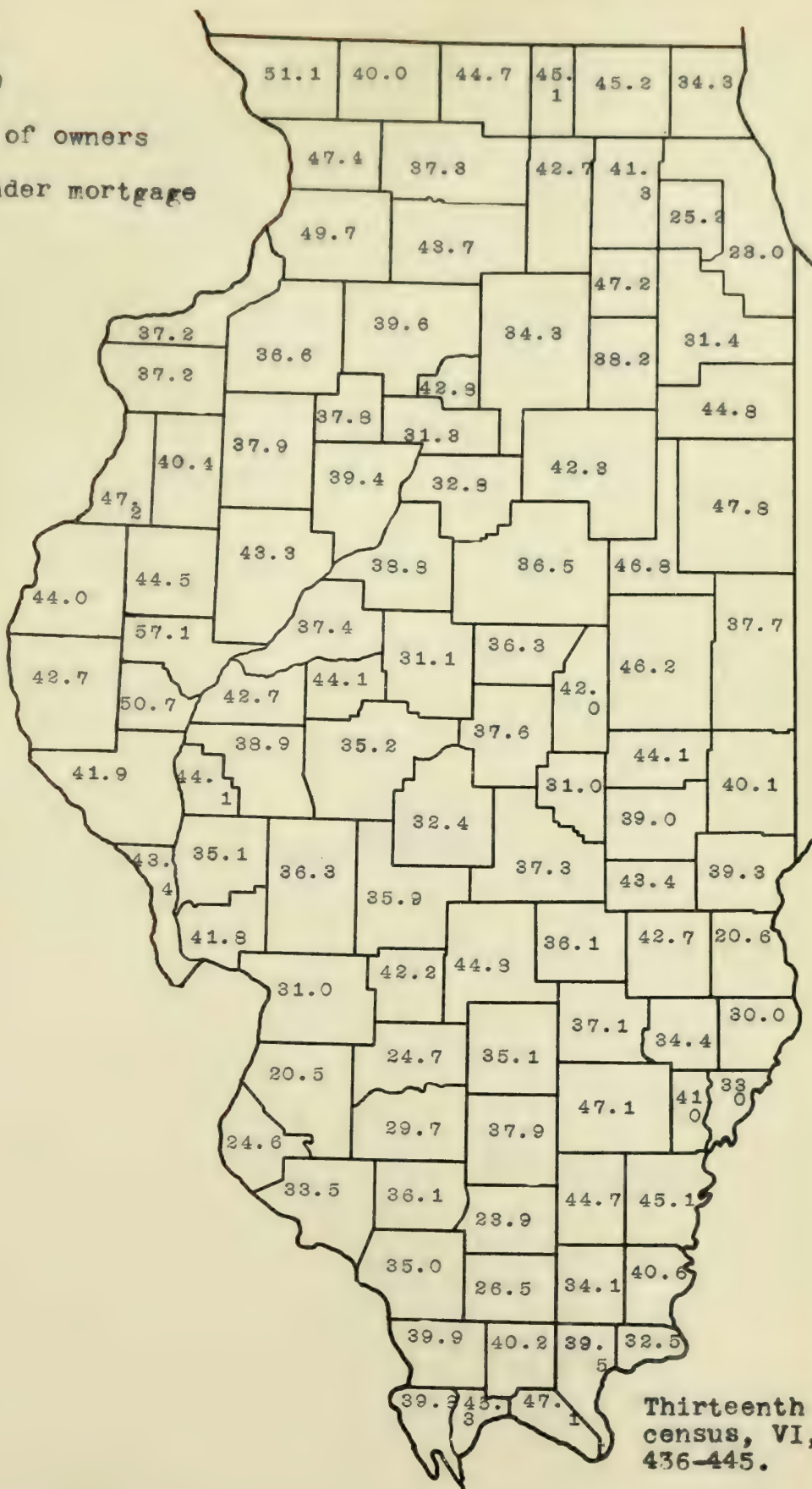
1847

LIBRARY
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UNIVERSITY OF TORONTO

1910

Percentage of owners
operating under mortgage

The state,
39.1



Thirteenth
census, VI,
436-445.

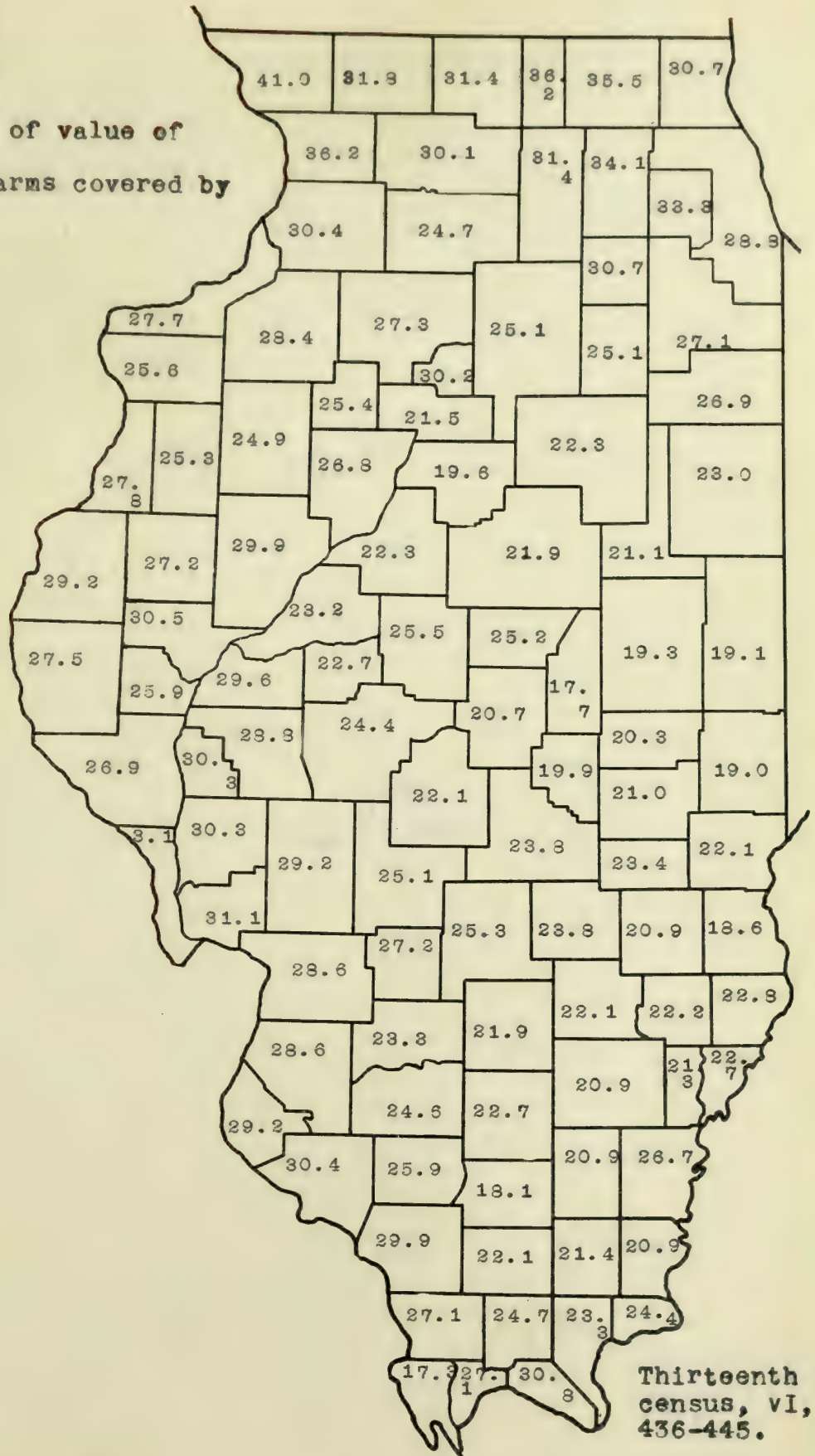
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ILLINOIS

1910

Percentage of value of
mortgaged farms covered by
mortgage

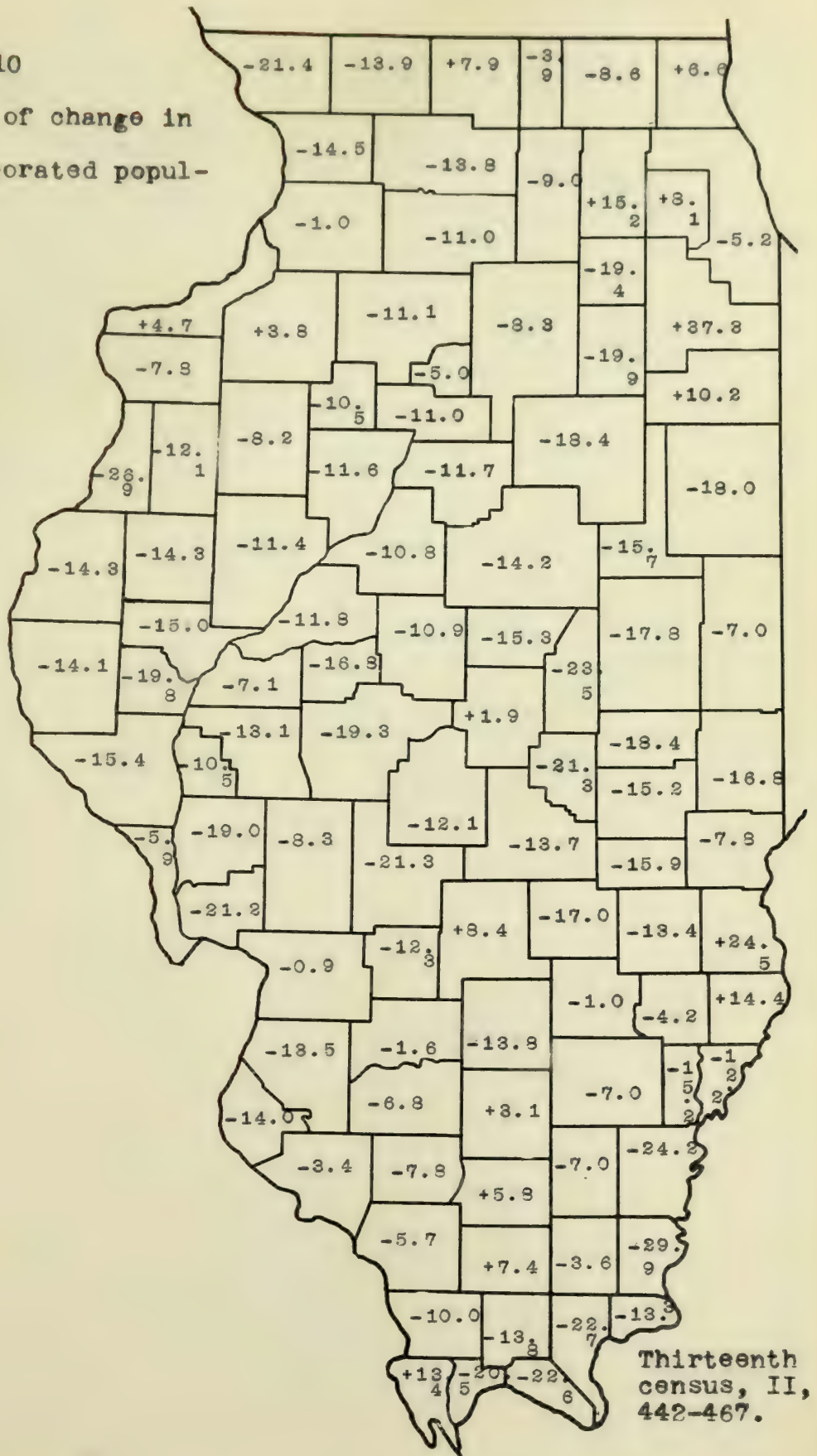
The state,
25.5



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Percentage of change in
the unincorporated popul-
ation

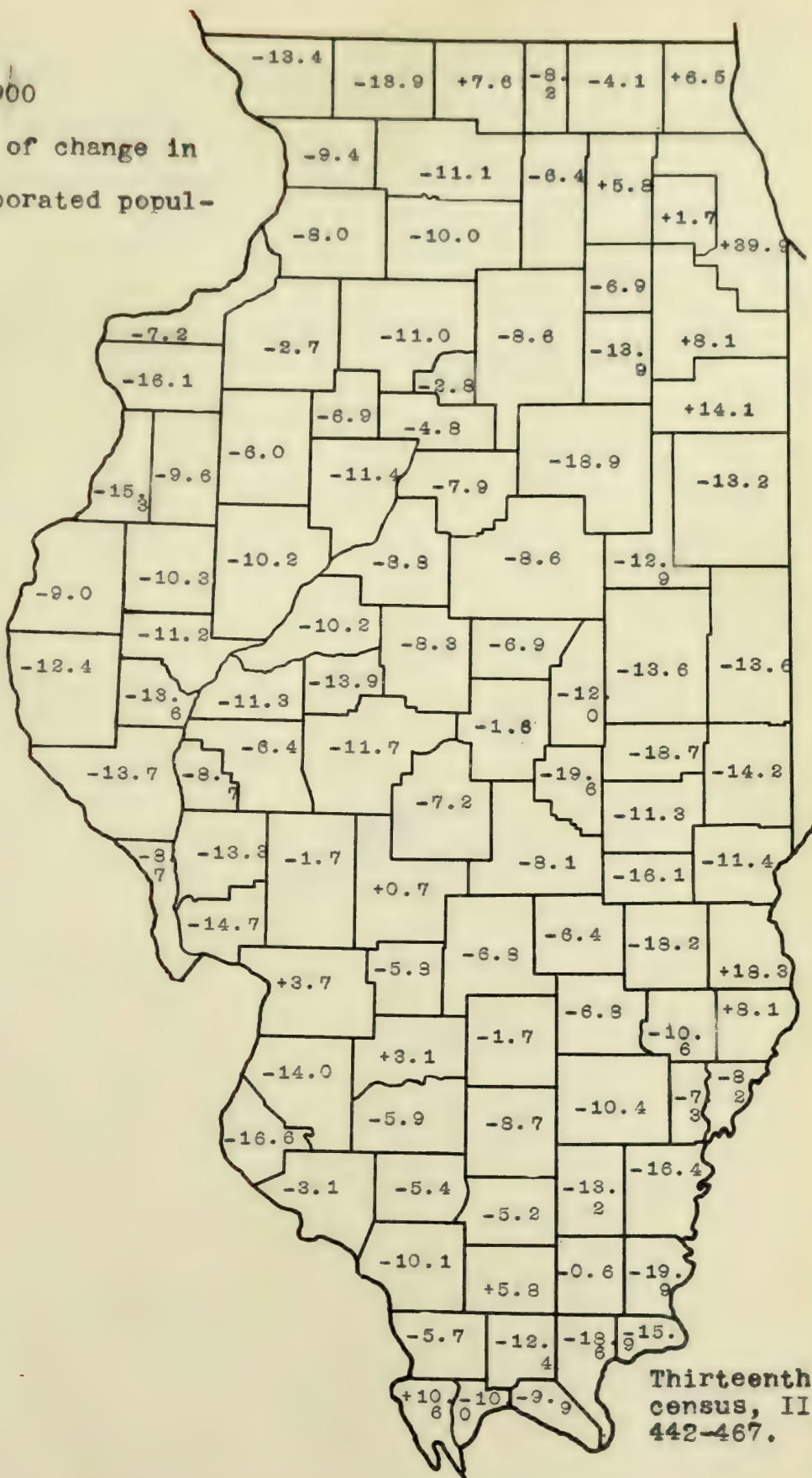
The state,
-7.2



LIBRARY
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UNIVERSITY OF ILLINOIS

Percentage of change in
the unincorporated popul-
ation

The state,
-5.7



Thirteenth
census, II,
442-467.

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UNIVERSITY OF ILLINOIS

ILLINOIS

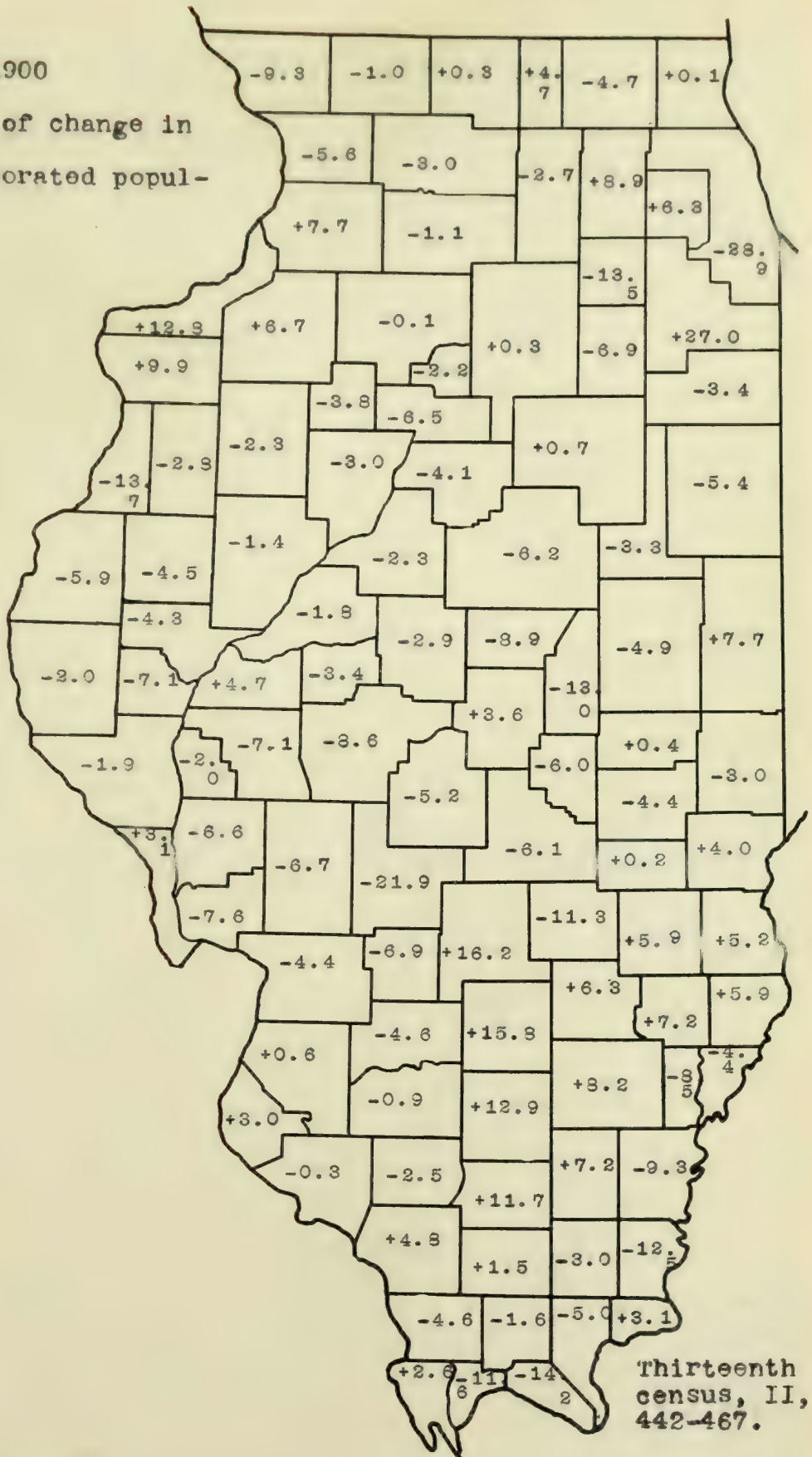
222.

1890-1900

Percentage of change in
the unincorporated popul-
ation

The state,

-1.6



1891

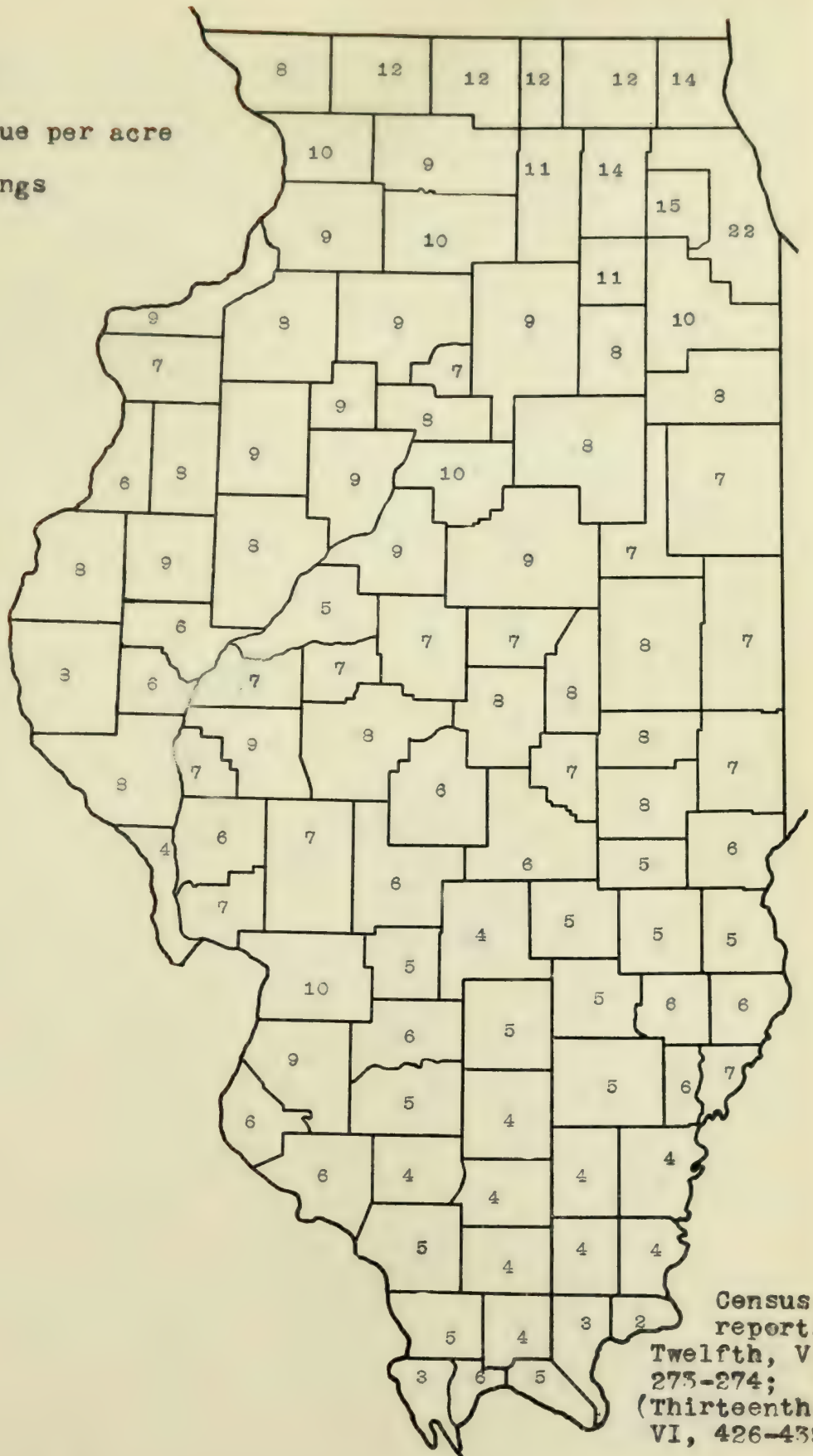
LIBRARY
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UNIVERSITY OF ILLINOIS

ILLINOIS

223.

1900
Average value per acre
of buildings

The state,
\$7.67



APPENDIX

LIBRARY
OF THE
UNIVERSITY OF ALABAMA

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

APPENDICES

APPENDIX I.

The following table summarizes for the United States (exclusive of outlying possessions) the occupational statistics with especial reference to agricultural pursuits.

Cen- sus Year	Total Population	Number of Per- sons (of class indicated) in all pursuits.	Number of Persons (as indica- ted) in Agriculture	Percentage of Total Popula- tion Oc- cupied	Percentage of Occupied Popula- tion in Agriculture
1910	91,972,266	(b) 38,167,336	12,373,159	41.5	32.4
1900	75,994,575	(b) 29,073,233	10,268,138	38.3	35.3
1890	62,947,714	(b) 22,735,661	8,463,365	36.1	37.2
1880	50,155,783	(b) 17,392,099	7,669,432	34.7	44.1
1870	38,558,371	(b) 12,505,923	5,922,335	32.4	47.4
1860	31,443,321	(c) 8,287,043	3,343,328	26.4	40.4
1850	23,191,876	(d) 5,371,876	2,406,731	23.2	44.8
1840	17,069,453	(e) 4,798,869	3,719,951	21.8	77.5
1820	9,638,453	(e) 2,490,770	2,068,958	25.8	83.0

(a) Exclusive of lumberman, raftsmen, woodchoppers, apiarists, fishermen, oystermen, foresters, owners and managers of log and timber camps, and those engaged in other agricultural and animal husbandry pursuits, so far as separately reported.

(b) Males and females over ten years of age.

(c) Free males and females over fifteen years of age.

(d) Free males over fifteen years of age.

(e) Free and slave males and females of all ages.

Authority: United States Census reports as follows:

1910: Thirteenth, I, 30-31, and IV, 91 and 97.

1900, 1890, 1880 and 1870: Twelfth, Occupations, Introduction, 1 (following xlix); also

1900: Twelfth, Occupations, 124.

1890: Eleventh, Part II, Population, 304 and 314.

1880: Tenth, Population, 777 and 793.

1870: Ninth, Population and Social Statistics, 704 and 731.

1860 and 1850: Twelfth, Occupations, Introduction, liii; also

1860: Eighth, Population, 104, 105 and 680.

1850: Seventh, lxx-lxxix, -nx 727.

1850 and 1820: Twelfth, Occupations, Introduction, xxx; also

1840: Sixth, 396 and 475.

1820: Fourth, Sheet 40.

In 1820 and 1840 persons, free and slave, of all ages were enumerated. In 1850 and 1860 slaves were excluded from the occupation data, and, of course, did not appear as such, in the reports following the Civil war. The lower age limit was fifteen in 1820 and 1860. Females were not included in 1850. Beginning with 1870 all males and females over ten years of age have been included in the occupation inquiry. All comparisons between data before 1870 must, therefore, be made guardedly.

The percentage of population engaged in the various pursuits in 1820 and 1840 was considerably less than in 1870, though the entire population appears to have been included in the occupation at all three dates. The coming of women into American industrial life may account, in part, for the larger figures prevailing from 1870 to the present time. From 1870 to 1910 the percentage of population that was "occupied" rose from 32.4 to 41.5.

Since slavery was largely confined to the agricultural industry, leaving the slaves out of consideration in the reports for 1850 and 1860 must have reduced the agricultural data for those dates. This doubtless accounts for the striking smallness of the percentages of occupied persons who were in agriculture in 1850 and 1860 when compared with the percentages for 1820 and 1840. There is no doubt, however, that the country was making rapid strides in commerce, manufacturing and other non-agricultural lines during the period, 1840 to 1870. This is attested by the fact that in 1870, even after the agricultural expansion which had taken place outside the Cotton belt during the sixties, the percentage of "occupied" agriculture which was in agriculture was 47.4. This was over 20

points lower than in 1840, the last preceding date at which practically the entire population was included in the occupation inquiry.

From 1870 to 1910 the prominence of the agriculturally occupied population declined by positive and rapid steps. In 1910 those engaged in agriculture constituted 32.4 per cent of the total number gainfully occupied, and 13.4 per cent of the total population. In 1880 the percentages were 33.0 and 31.4, respectively.

It would seem, therefore, that a larger and larger proportion of the people have gone into the various employments, but that agriculture has dropped more or less precipitately from its former relative prominence as a field of employment.

APPENDIX II.

Definitions. - To assist in securing comparability for its statistics of agriculture, the Bureau of the Census provided the enumerators with certain definitions and instructions, the more important of which were essentially as given below.

Farm. - A "farm" for census purposes is all the land which is directly farmed by one person managing and conducting agricultural operation, either by his own labor alone or with the assistance of members of his household or hired employees. The term "agricultural operations" is used as a general term referring to the work of growing crops, producing other agricultural products, and raising animals, fowls, and bees. A "farm" as thus defined may consist of a single tract of land, or of a number of separate and distinct tracts, and these several tracts may be held under different tenures, as where one tract is owned by the farmer and another tract is hired by him. Further, when a landowner has one or more tenants, renters, croppers, or managers, the land operated by each is considered a "farm".

In applying the foregoing definition of a "farm" for census purposes, enumerators were instructed to report as a "farm" any tract of three or more acres used for agricultural purposes, and also any tract containing less than three acres which produced at least \$250 worth of farm products in the year 1909.

Farmer. - A "farmer" or "farm operator", according to the census definition, is a person who directs the operations of a farm. Hence owners of farms who do not themselves direct the farm operations are not reported as "farmers". Farmers are divided by the

Bureau of the Census into three general classes according to the character of their tenure, namely, owners, tenants, and managers.

Farm owners include (1) farmers operating their own land only, and (2) those operating both their own land and some land hired from others. The latter are sometimes referred to in the census reports as "part owners", the term "owners" being then restricted to those owning all their land.

Farm tenants are farmers who, as tenants, renters, or croppers, operate hired land only. They were reported in 1910 in three classes: (1) Share tenants - those who pay a certain share of the products, as one-half, one-third, or one-quarter; (2) share-cash tenants - those who pay a share of the products for part of the land rented by them and cash for part; and (3) cash tenants - those who pay a cash rental or a stated amount of labor or products such as \$7, 10 bushels of wheat, or 100 pounds of seed cotton per acre.

Managers are farmers who are conducting farm operations for the owner for wages or a salary.

Farm land. - Farm land is divided into (1) improved land, (2) woodland, and (3) all other unimproved land. The same classification was followed in 1880. At former censuses, except that of 1880, farm land was divided into improved land and unimproved land, woodland being included with unimproved land. Improved land includes all land regularly tilled or mowed, land pastured and cropped in rotation, land lying fallow, land in gardens, orchards, vineyards, and nurseries, and land occupied by farm buildings.

Woodland includes all land covered with natural or planted forest trees, which produce, or later may produce, firewood or other forest products. All other unimproved land includes brush land, rough or stony land, swamp land, and any other land which is not improved or in forest. The Census classification of farm land as "improved land", "woodland", and "other unimproved land" is one not always easy for the farmers or enumerators to make, and the statistics therefore must be considered at best only a close approximation.

APPENDIX III

In 1900 there were 1,060,547 persons (853,264 males and 207,283 females) in agriculture, exclusive of wood-choppers, lumbermen or raftsmen under 16 years of age. In 1890 the corresponding number was approximately 323,800 (243,798 males, according to 1900, Ag. lxxviii, and 80,000 females, the number given in 1890, Pop., 362, being diminished by the same percentage as in the case of the number of males. According to the rate of increase from 1890 to 1900 of those persons in agriculture over 16 years of age (males, 11.9, and females, 30.3 per cent) there should have been 916,800 persons (757,777 males and 159,080 females) in agriculture in 1890 under 16 years of age. To assign this number for 1890, it is necessary to increase the number actually reported for that date by 594,000.

For 1890, therefore, the number of persons employed in agriculture is set at 9,057,365, instead of 8,463,365 as would be the case without the correction.

The data for 1880 have been corrected for the same error, by adding a number which represents the same percentage of increase as that by which the uncorrected figures for 1890 exceed the uncorrected figures for 1880. Thus, the figures for 1880 are made to stand 8,183,732 instead of 7,669,432.

APPENDIX IV

Domestic animals	1910	1880	1850
Head of			
Cattle - Total	2,440,577	2,384,322	912,036
Dairy or milch cows	1,050,223	865,913	294,671
Horses	1,452,887	1,023,082	267,653
Mules, asses & burros	150,696	123,278	10,573
Swine	4,686,362	5,170,266	1,915,907
Sheep	1,059,846	1,037,073	894,043
Productions			
Pounds of			
Butter	46,609,992	53,657,943	12,526,543
Cheese	81,918	1,035,069	1,278,225
Maple sugar	5,366	80,193	248,904
Tobacco	1,029,616	3,935,825	841,394
Wool	4,971,380	6,093,066	2,150,113
Bushels of			
Irish potatoes	12,166,091	10,365,707	2,514,861

United States census reports:

Thirteenth VI, 417-446; and Tenth, Agriculture, 5-24.

APPENDIX V.

Data on land in farms of part owners in Illinois, 1910,
privately supplied by the United States Census Bureau.

County	Total (acres)	Reported as owned (acres)	Reported as rented (acres)	Not reported (acres)
Illinois ¹	5,578,133	2,989,385	2,414,448	174,300
Adams	91,510	53,459	36,618	2,433
Alexander	4,914	2,743	1,314	857
Bond	53,081	33,910	18,605	533
Boone	12,011	5,777	5,712	522
Brown	35,054	20,370	13,706	978
Bureau	72,993	37,284	33,780	1,949
Calhoun	33,172	13,689	8,149	1,334
Carroll	(1)	(1)	(1)	(1)
Cass	32,297	17,799	13,478	1,020
Champaign	108,830	52,427	54,289	2,144
Christian	72,838	36,609	34,870	1,349
Clark	72,144	38,390	31,342	2,412
Clay	65,384	38,829	25,534	1,021
Clinton	61,179	39,586	20,797	796
Coles	48,794	23,852	22,945	1,997
Cook	36,709	14,680	19,376	2,353
Crawford	56,471	29,392	25,199	1,880

1. Estimated data for Carroll, Lee and Massac counties,
the ratio of the data for the three counties to those for
the other ninety-nine being the same in each column as
the ratio of acres in farms for the two groups of counties:

153,431	82,239	66,436	4,756
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Data on land in farms of part owners in Illinois, 1910,
privately supplied by the United States Census Bureau.

County	Total (acres)	Reported as owned (acres)	Reported as rented (acres)	Not reported (acres)
Illinois ¹	5,578,133	2,989,385	2,414,448	174,300
Cumberland	66,475	35,710	29,626	1,139
Dekalb	34,297	18,403	15,108	786
De Witt	39,428	17,239	20,322	1,867
Douglas	45,497	21,916	22,465	1,116
Dupage	5,443	1,998	2,178	1,267
Edgar	81,610	37,009	42,020	2,581
Edwards	57,598	35,311	21,477	810
Effingham	75,911	49,115	26,158	638
Fayette	124,743	72,197	50,644	1,902
Ford	33,267	16,212	16,897	158
Franklin	51,872	29,649	20,414	1,809
Fulton	62,738	32,883	26,732	3,123
Gallatin	39,850	22,158	16,974	727
Greene	64,898	33,581	28,002	3,315
Grundy	35,156	19,082	16,074
Hamilton	60,622	38,384	21,721	517
Hancock	98,882	54,214	43,582	1,086

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the ratio of the data for the three counties to those for
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the ratio of acres in farms for the two groups of counties:

153,431	82,239	66,436	4,756
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Data on land in farms of part owners in Illinois, 1910,
privately supplied by the United States Census bureau.

County	Total (acres)	Reported as owned (acres)	Reported as rented (acres)	Not reported (acres)
Illinois ¹	5,578,133	2,989,385	2,414,448	174,300
Hardin	6,658	4,462	1,933	263
Henderson	36,357	17,817	16,386	2,154
Henry	57,255	30,821	26,102	332
Iroquois	29,138	47,901	50,219	1,048
Jackson	60,793	35,503	24,657	633
Jasper	102,410	30,773	37,904	3,733
Jefferson	77,419	49,680	26,369	1,370
Jersey	47,089	25,333	20,285	1,411
Jo Davies	29,157	17,817	11,055	285
Johnson	28,548	18,767	9,034	747
Kane	11,727	6,242	4,645	840
Kankakee	66,853	32,495	30,851	3,505
Kendall	16,673	8,838	7,635	.....
Knox	66,184	33,927	30,606	1,651
Lake	28,239	14,700	11,956	1,583
Lasalle	88,334	42,203	41,205	4,926
Lawrence	42,464	20,546	19,540	2,378

1. Estimated data for Carroll, Lee and Massac counties,
the ratio of the data for the three counties to those for
the other ninety-nine being the same in each column as
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153,431	82,239	66,436	4,756
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Data on land in farms of part owners in Illinois, 1910,
privately supplied by the United States Census bureau.

County	Total (acres)	Reported as owned (acres)	Reported as rented (acres)	Not reported (acres)
Illinois ¹	5,578,133	2,989,385	2,414,448	174,300
Lee	(1)	(1)	(1)	(1)
Livingston	98,530	49,511	47,448	1,571
Logan	43,544	21,027	21,886	631
McDonough	58,656	29,921	28,375	330
McHenry	14,866	8,245	5,646	975
McLean	110,444	50,997	54,858	4,589
Macon	55,763	26,904	27,800	1,059
Macoupin	100,894	56,417	42,447	1,330
Madison	69,317	41,081	26,817	1,419
Marion	94,055	56,032	34,706	3,317
Marshall	39,311	20,878	17,334	1,099
Mason	48,465	23,120	23,371	1,974
Massac	(1)	(1)	(1)	(1)
Menard	35,944	16,588	18,404	952
Mercer	39,169	19,993	17,929	1,247
Monroe	58,484	27,494	15,579	15,411
Montgomery	85,631	48,881	35,308	1,442

1. Estimated data for Carroll, Lee and Massac counties,
the ratio of the data for the three counties to those for
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153,431	82,239	66,436	4,756
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Data on land in farms of part owners in Illinois, 1910,
privately supplied by the United States Census bureau.

County	Total (acres)	Reported as owned (acres)	Reported as rented (acres)	Not reported (acres)
Illinois ¹	5,578,133	2,989,385	2,414,448	174,300
Morgan	73,905	36,133	35,770	2,002
Moultrie	41,297	19,358	21,469	470
Ogle	52,248	26,771	23,338	2,139
Peoria	60,351	30,782	27,814	1,755
Perry	48,425	28,445	18,402	1,578
Piatt	39,223	18,670	20,553	.....
Pike	80,860	38,223	37,458	5,209
Pope	24,070	15,271	8,032	717
Pulaski	16,896	8,731	7,024	1,141
Putnam	16,281	7,628	7,818	835
Randolph	63,519	36,202	25,410	1,907
Richland	57,004	33,440	22,241	1,323
Rock Island	26,426	14,338	11,517	571
St. Clair	57,528	32,888	24,122	518
Saline	44,347	27,597	14,494	2,256
Sangamon	103,865	49,839	51,734	2,292
Schuyler	52,267	29,896	19,428	2,943

1. Estimated data for Carroll, Lee and Massac counties,
the ratio of the data for the three counties to those for
the other ninety-nine being the same in each column as
the ratio of acres in farms for the two groups of counties:

153,431	82,239	66,436	4,756
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Data on land in farms of part owners in Illinois, 1910,
privately supplied by the United States Census Bureau.

County	Total (acres)	Reported as owned (acres)	Reported as rented (acres)	Not reported (acres)
Illinois ¹	5,578,133	2,989,385	2,414,448	174,300
Scott	33,336	12,332	14,225	1,139
Shelby	99,814	51,627	44,332	3,855
Stark	27,141	14,735	10,901	1,475
Stephenson	39,513	23,509	16,522	432
Tazewell	57,886	30,182	26,895	809
Union	33,179	22,306	13,074	799
Vermilion	91,182	40,226	49,029	1,927
Wabash	24,517	12,126	11,474	917
Warren	61,299	30,413	29,542	1,344
Washington	69,504	44,384	33,576	1,044
Wayne	104,515	65,795	35,587	3,133
White	60,034	29,273	24,428	6,333
Whiteside	33,639	17,047	15,271	1,321
Will	71,139	36,025	32,774	2,340
Williamson	39,161	23,219	15,120	322
Winnebago	25,777	12,118	11,274	2,385
Woodford	47,258	24,266	22,716	276

1. Estimated data for Carroll, Lee and Massac counties,
the ratio of the data for the three counties to those for
the other ninety-nine being the same in each column as
the ratio of acres in farms for the two groups of counties:

153,431	82,239	66,436	4,756
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APPENDIX VI.

Data on "Unincorporated" Population of Illinois Counties,
1910, 1900 and 1890.

County	Number of Inhabitants Dwelling Outside of Incorporated Places			Percentage of Change in Unincorporated Population		
	1910	1900	1890	1900- 1910	1890- 1900	1890- 1910
Illinois	1,518,264	1,610,554	1,636,815	-5.7	-1.6	-7.2
Adams	22,179	25,318	25,324	-12.4	-2.0	-14.1
Alexander	7,076	6,401	6,239	+10.6	+2.6	+13.4
Bond	9,978	10,592	11,379	-5.8	-6.9	-12.3
Boone	7,369	8,029	7,638	-8.2	+4.7	- 3.9
Brown	7,426	8,597	9,256	-13.6	-7.1	-19.8
Bureau	17,584	19,758	19,783	-11.0	-.12	-11.1
Calhoun	6,532	7,155	6,941	-8.7	+3.1	-5.9
Carroll	9,133	10,084	10,681	-9.4	-5.6	-14.5
Cass	7,236	8,192	7,824	-11.3	+4.7	-7.1
Champaign	21,847	25,291	26,587	-13.6	-4.9	-17.8
Christian	16,683	17,983	18,975	-7.2	-5.2	-12.1
Clark	16,195	18,283	17,572	-11.4	+4.0	-7.8
Clay	x 13,4 ² 08	14,410	13,562	-6.8	+6.3	-1.0
Clinton	12,2 ³ 13	11,941	12,517	+3.1	-4.6	-1.6
Coles	14,760	16,647	17,405	-11.3	-4.4	-15.2
Cook	72,062	51,510	72,440	+39.9	-28.9	-.52
Crawford	17,487	14,777	14,041	+18.3	+5.2	+24.5
Cumberland	10,717	12,773	12,745	-16.1	+.22	-15.9
Dekalb	13,602	14,532	14,943	-6.4	-2.7	-9.0
Dewitt	9,783	10,513	11,545	-6.9	-8.9	-15.3

Data on "Unincorporated" Population of Illinois Counties,
1910, 1900 and 1890.

County	Number of Inhabitants Dwelling Outside of Incorporated Places			Percentage of Change in Unincorporated Population		
	1910	1900	1890	1900- 1910	1890- 1900	1890- 1910
Illinois	1,518,264	1,610,554	1,636,215	-5.7	-1.6	-7.2
Douglas	10,027	12,334	12,290	-18.7	+4	-18.4
Dupage	12,307	12,097	11,382	+1.7	+6.3	+8.1
Edgar	15,438	17,987	18,541	-14.2	-3.0	-16.8
Edwards	6,290	7,783	7,417	-7.3	-8.5	-15.2
Effingham	11,656	12,456	14,048	-6.4	-11.3	-17.0
Fayette	21,106	22,637	19,475	-6.8	+16.2	+8.4
Ford	9,238	10,598	10,957	-12.9	-3.3	-15.7
Franklin	16,508	17,420	15,600	-5.2	+11.7	+5.8
Fulton	24,141	26,389	27,260	-10.2	-1.4	-11.4
Gallatin	9,131	11,403	13,026	-19.9	-12.5	-29.9
Greene	12,304	14,192	15,194	-13.3	-6.6	-19.0
Grundy	9,049	10,515	11,293	-13.9	-6.9	-19.9
Hamilton	15,020	17,313	16,144	-13.2	+7.2	-7.0
Hancock	16,928	18,605	19,762	-9.0	-5.9	-14.3
Hardin	5,467	6,502	6,308	-15.9	+3.1	-13.3
Henderson	6,792	8,019	9,295	-15.3	-13.7	-26.9
Henry	20,231	20,798	19,496	-2.7	+6.7	+3.8
Iroquois	21,525	24,801	26,239	-13.2	-5.4	-18.0
Jackson	14,621	19,597	18,696	-10.1	+4.8	-5.7
Jefferson	19,760	21,651	19,171	-8.7	+12.9	+3.1

Data on "Unincorporated" Population of Illinois Counties,
1910, 1900 and 1890.

County	Number of Inhabitants Dwelling Outside of Incorporated Places			Percentage of Change in Unincorporated Population		
	1910	1900	1890	1900- 1910	1890- 1900	1890- 1910
Illinois	1,518,264	1,610,554	1,636,215	-5.7	-1.6	-7.2
Jersey	7,800	9,144	9,895	-14.7	-7.6	-21.2
Jo Davies	11,569	13,359	14,727	-13.4	-9.3	-21.4
Johnson	11,408	13,017	13,231	-12.4	-1.6	-13.8
Kane	17,739	16,796	15,418	+5.8	+8.9	+15.2
Kankakee	16,711	14,644	15,162	+14.1	-3.4	+10.2
Kendall	6,980	7,496	8,663	-6.9	-13.5	-19.4
Knox	15,226	16,200	16,586	-6.0	-38.6	-8.2
Lake	14,942	14,036	14,020	+6.5	+1.1	+6.6
Lasalle	27,854	30,474	30,368	-8.6	+3.3	-8.3
Lawrence	13,280	12,289	11,601	+8.1	+5.9	14.4
Lee	15,100	16,785	16,966	-10.0	-1.1	-11.0
Livingston	22,518	27,779	27,596	-18.9	+7.7	-18.4
Logan	13,398	14,611	15,050	-8.3	-2.9	-10.9
McDonough	13,683	15,254	15,971	-10.3	-4.5	-14.3
McHenry	16,319	17,020	17,856	-4.1	-4.7	-8.6
McLean	26,985	29,517	31,461	-8.6	-6.2	-14.2
Macon	18,265	18,565	17,924	-1.6	+3.6	+1.9
Macoupin	22,354	22,750	24,382	-1.7	-6.7	-8.3
Madison	25,127	24,232	25,358	+3.7	-4.4	-.91
Marion	16,182	16,469	14,221	-1.7	+15.8	-13.8

Data on "Unincorporated" Population of Illinois Counties,
1910, 1900 and 1890.

County	Number of Inhabitants Dwelling Outside of Incorporated Places			Percentage of Change in Unincorporated Population		
	1910	1900	1890	1900- 1910	1890- 1900	1890- 1910
Illinois	1,518,364	1,610,554	1,636,215	-5.7	-1.6	-7.2
Marshall	7,336	8,009	8,570	-4.8	-6.5	-11.0
Mason	9,173	10,312	10,397	-10.2	-1.8	-11.8
Massac	7,338	8,176	9,524	-9.9	-14.2	-22.6
Menard	6,839	7,998	8,383	-13.9	-3.4	-16.8
Mercer	11,697	13,936	12,682	-16.1	+9.9	-7.8
Monroe	8,442	10,119	9,821	-16.6	+3.0	-14.0
Montgomery	15,888	15,771	20,174	+0.7	-21.9	-21.3
Morgan	14,556	15,556	16,743	-6.4	-7.1	-13.1
Moultrie	8,611	10,391	10,949	-19.6	-6.0	-21.3
Ogle	17,243	19,396	19,892	-11.1	-3.0	-13.8
Peoria	21,392	24,485	24,546	-11.4	-.3	-11.6
Perry	11,226	11,869	12,179	-5.4	-2.5	-7.8
Piatt	9,564	10,869	12,498	-12.0	-13.0	-23.5
Pike	18,191	21,074	21,493	-13.7	-1.9	-15.4
Pope	9,767	12,003	12,630	-18.6	-5.0	-22.7
Pulaski	8,869	9,852	11,152	-10.0	-11.6	-20.5
Putnam	3,533	3,339	3,721	-2.8	-2.2	-5.0
Randolph	16,485	17,019	17,074	-3.1	-.32	-3.4
Richland	9,917	11,097	10,356	-10.6	+7.2	-4.2
Rock Island	13,885	14,957	13,256	-7.2	+12.8	+4.7

Data on "Unincorporated" Population of Illinois Counties,
1910, 1900, and 1890.

County	Number of Inhabitants Dwelling Outside of Incorporated Places			Percentage of Change in Unincorporated Population		
	1910	1900	1890	1900- 1910	1890- 1900	1890- 1910
Illinois	1,518,834	1,610,554	1,636,215	-5.7	-1.6	-7.2
St. Clair	22,109	25,717	25,549	-14.0	+6.4	-13.5
Saline	16,833	16,397	16,912	-.6	-3.0	-3.6
Sangamon	24,643	27,914	30,535	-11.7	-8.6	-19.3
Schuyler	11,879	13,382	13,982	-11.2	-4.3	-15.0
Scott	6,309	6,909	7,050	-8.7	-2.0	-10.6
Shelby	20,345	22,135	23,583	-8.1	-6.1	-13.7
Stark	6,327	6,796	7,067	-6.9	-3.8	-10.5
Stephenson	15,476	17,303	17,988	-13.9	-1.0	-13.9
Tazewell	15,463	16,974	17,370	-8.8	-2.3	-10.8
Union	15,416	16,356	17,133	-5.7	-4.6	-10.0
Vermilion	29,630	34,300	31,835	-13.6	+7.7	-7.0
Wabash	7,024	7,348	8,003	-8.2	-4.4	-12.2
Warren	11,462	12,678	13,046	-9.6	-2.8	-12.1
Washington	13,067	13,881	14,014	-5.9	-.9	-6.8
Wayne	20,754	23,159	21,403	-10.4	+8.2	-3.0
White	14,805	17,707	19,521	-16.4	-9.3	-24.2
Whiteside	16,055	17,455	16,213	-8.0	+7.7	-1.0
Will	34,945	32,338	25,428	+8.1	+27.0	+32.3
Williamson	20,500	19,373	19,094	+5.8	+1.5	+7.4
Winnebago	14,514	13,494	13,450	+7.6	+.3	+7.9
Woodford	11,570	12,557	13,096	-7.9	-4.1	-11.7

APPENDIX VII

Vita

The writer was born at Moweaqua, Illinois, September 3, 1890. His preparatory work was done in the Moweaqua High School. From 1907 to 1911 he attended Illinois Wesleyan University at Bloomington, Illinois, taking the A.B. degree. From 1911 to 1915 he did graduate work in the University of Illinois, taking the A.M. degree in 1912, holding a research assistantship in economic history, 1912-1913, a half-time instructorship in economics in 1913-1914, and a fellowship in economics in 1914-1915. The summer of 1914 was spent in Germany in Berlin University in an attempt to fulfill an appointment to a traveling fellowship from the University of Illinois for 1914-1915.

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- A. J. S.** American Journal of Sociology, Chicago.
- A. H. A.** American Historical Association Publications, Washington.
- A. S. A.** American Statistical Association Publications, Boston.
- J. P. E.** Journal of Political Economy, University of Chicago.
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